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A

Confutation of Atheism

From the

Structure and Origin of Humane Bodies.

PART I.

A

SERMON

PREACHED

At Saint *Martin's in the Fields*,

May 2. 1692.

Being the *Third* of the Lecture Founded by the Honourable *ROBERT BOYLE*, Esquire.

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EDWARD, Lord Bishop of *Worcester*.

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Geo. Royse, R. R^mo in Christo Patri ac D^no D^no *Johanni* Archiep. *Cantuar.* à Sacris Domest.

May 7.
1692.

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ACTS XVII. 27.

That they ſhould ſeek the Lord, if haply they might feel after him, and find him: though he be not far from every one of us; for in him we Live, and Move, and have our Being.

I Have ſaid enough in my laſt, to ſhew the fitneſs and pertinency of the Apoſtle's Diſcourſe to the Perſons he addreſs'd to: whereby it ſufficiently appears that he was no *Babbler*, as ſome of the *Athenian* Rabble reproach'd him; not a σπερμολόγος, a buſie prating Fellow; as in another language they ſay *Sermones ferere* and *Rumores ferere* in a like mode of Expreſſion; that he did not talk at random, but was throughly acquainted with the ſeveral humors and opinions of his Auditors; and as *Moſes was learned in all the Wiſdom of the Ægyptians*, ſo it is manifeſt from this Chapter alone, if nothing elſe had been now extant, that St. *Paul* was a great Maſter in all the Learning of the *Greeks*. One thing further I ſhall obſerve from the words of the Text, before I enter upon the Subject which I propoſed; That it requires *ſome* Induſtry and Conſideration to find out the Being of God; we muſt *ſeek the Lord* and *feel after him*,

Plautus. Virgil. Livius.

before we can *find him* by the Light of Nature. The ſearch indeed is not very tedious, nor difficult; *He is not far from every one of us; for in him we live, and move, and have our Being.* The conſiderat on of our Mind and Underſtanding, which is an incorporeal Subſtance independent from Matter; and the contemplation of our own Bodies, which have all the ſtamps and characters of exc llent Contrivance; theſe alone, though we look upon nothing abroad, do very eaſily and proximately guide us to the wiſe Author of all things. But however, as we ſee from our Text, *ſome* Thought and Meditation are neceſſary to it; and a man may poſſibly be ſo ſtupid, or wilfully ignorant or perverſe, as not to have *God in all his thoughts*, or to *ſay in his heart, There is none.* And this being obſerved, we have an effectual anſwer to that Cavil of the Atheiſts; who make it an objection againſt the Being of God, that they do not diſcover him without any Application, in ſpite of their corrupt Wills and debauch'd Underſtandings. If, ſay they, ſuch a God, as we are told of, had created and formed us; ſurely he would have left upon our Minds a native and indeleble Inſcription of Himſelf; whereby we muſt needs have *felt* him, even without *ſeeking*; and believed in him, whether we would or no. So that theſe Atheiſts being conſcious

ſcious to themſelves, that they are void of ſuch Belief, which (they ſay) if God was, would actually and neceſſarily be in them, do bring their own wicked Doubting and Denying of God as Evidence againſt His Exiſtence; and make their very Infidelity an argument for it ſelf. To which we reply, That God hath endued Mankind with Powers and Abilities, which we call Natural Light, and Reaſon, and Common Senſe; by the due uſe of which we cannot miſs of the Diſcovery of his Being; and this is ſufficient. But as to any other original Notion and Propoſition, that *God is*, actually imprinted on us, antecedently to all uſe of our Faculties, we may affirm againſt the Atheiſts, that the abſence of ſuch a Notion doth not give the leaſt preſumption againſt the Truth of Religion: becauſe, though God be ſuppoſed to be, yet that Notion diſtinct from our Faculties would not be requiſite; nor is it pretended to by Religion. *Firſt*, it would not be requiſite; becauſe without any ſuch primitive Impreſſion, we can eaſily attain to the knowledge of the Deity by the ſole uſe of our Natural Reaſon. And again, ſuch an Impreſſion would have render'd the Belief of a God irreſiſtible and neceſſary, and thereby have bereaved it of all that is good and acceptable in it. For as by taking away the Freedom of Human Will, and making us mere-

mere Machins under Fatal ties and impulſes, it would deſtroy the very nature of Moral Vertue: ſo likewiſe as to Faith, there would be nothing worthy of praiſe and recompence in it, if there were left no poſſibility of Doubting or Denying. And *ſecondly*, ſuch a radical Truth, that *God is*, ſpringing up together with the eſſence of the Soul, and previous to all other Thoughts, is not pretended to by Religion. No ſuch thing, that I know of, is affirmed or ſuggeſted by the Scriptures. There are ſeveral Topics there uſed againſt the Atheiſm and Idolatry of the Heathens; ſuch as the viſible marks of Divine Wiſdom and Goodneſs in the works of the Creation, the vital Union of Souls with Matter, and the admirable Structure of Animate Bodies, and the like. But if our Apoſtle had aſſerted ſuch an Anticipating Principle engraven upon our Souls before all Exerciſe of Reaſon; what did he talk of *ſeeking the Lord, if haply they might feel after him and find him:* ſeeing that if the knowledge of him was in that manner innate and perpetual, there would be no occaſion of *ſeeking*, nor any *hap* or hazard in the finding? Such an Inſcription would be ſelf-evident without any Ratiocination or Study, and could not fail conſtantly to exert its Energy in their Minds. What did he talk of the *Unknown God* and *ignorantly worſhipping*; when

when if such an Original Signature were always inherent in their hearts; God could not be unknown to, or ignorantly worshipp'd by any? That primary Proposition would have been clear, and distinct, and efficacious, and universal in the minds of men. St. *Paul* therefore, it appears, had no apprehension of such a First Notion; nor made use of it for an argument; which (seeing that whosoever hath it, must needs know that he hath it) if it be not believed before by the Adversary, is false; and if it be believed, is superfluous: and is of so frail and brittle a texture, that whereas other arguments are not answered by bare denying without contrary Proof, the mere doubting and disbelieving of this must be granted to be *ipso facto* the breaking and confuting of it. Thus much therefore we have proved against the Atheist; that such an original irresistible Notion is neither requisite upon supposition of a Deity, nor is pretended to by Religion; so that neither the Absence of it is any argument against the Being of God, nor a supposed false Assertion of it an objection against the Scripture. 'Tis enough, that all are furnish'd with such Natural Powers and Capacities; that if they seriously reflect, if they *seek the Lord* with meditation and study, they cannot fail of *finding* and discovering him: whereby God is not

not *left without witneſs*, but the Atheiſts *without excuſe*. And now I haſte to the Second Propoſition deduced from the Text, and the argument of my preſent Diſcourſe, That the Organical Structure of Human Bodies, whereby they are fitted to live, and move, and be vitally informed by the Soul, is unqueſtionably the workmanſhip of a moſt wiſe, and powerfull, and beneficent Maker.

Firſt, 'tis allowed and acknowledged by all parties; that the Bodies of Men and other Animals are excellently well fitted for Life, and Motion, and Senſation; and the ſeveral Parts of them well adapted and accommodated to their particular Functions. The Eye is very proper and meet for ſeeing, the Tongue for taſting and ſpeaking, the Hand for holding and lifting, and ten thouſand Operations beſide: and ſo for the inward Parts; the Lungs are ſuitable for Reſpiration, the Stomach for Concoction, the Lacteous Veſſels for the Reception of the Chyle, the Heart for the Diſtribution of the Blood to all the Parts of the Body. This is matter of Fact, and beyond all diſpute; and in effect is no more than to ſay, that *Animals are Animals*; for if they were deprived of theſe Qualifications, they could not be ſo. This therefore is not the matter in Queſtion between us and the

the Atheiſts: But the Controverſie is here. We, when we conſider ſo many conſtituent parts in the Bodies of Men, all admirably compacted into ſo noble an Engine; in each of the very Fingers, for example, there are Bones, and Griſtles, and Ligaments, and Membranes, and Muſcles, and Tendons, and Nerves, and Arteries, and Veins, and Skin, and Cuticle, and Nail; together with Marrow, and Fat, and Blood, and other Nutritious Juices; and all thoſe Solid parts of a determinate Size, and Figure, and Texture, and Situation; and each of them made up of Myriads of little Fibres and Filaments, not diſcoverable by the naked Eye: I ſay, when We conſider how innumerable parts muſt conſtitute ſo ſmall a member, as the Finger, we cannot look upon *it* or the whole Body, wherein appears ſo much Fitneſs, and Uſe, and Subſerviency to infinite Functions, any otherwiſe than as the effect of Contrivance and Skill, and conſequently the Workmanſhip of a moſt Intelligent and Beneficent Being. And though now the Propagation of Mankind is in a ſettled method of Nature, the inſtrument of God; yet we affirm that its firſt Production was by the immediate Power of the Almighty Author of Nature: and that all ſucceeding Generations of Men are the Progeny of one primitive Couple.

This is a Religious man's account of the Frame and Origination of himſelf. Now the Atheiſts agree with us, as to the Fitneſs of Man's Body and its ſeveral parts to their various Operations and Functions (for that is viſible and paſt all contradiction) but they vehemently impugn, and horribly dread the Thought, That this Uſefulneſs of the Parts and the Whole ſhould firſt ariſe from Wiſdom and Deſign. So that here will be the point in debate, and the ſubject of our preſent Undertaking; Whether this acknowledged Fitneſs of Humane Bodies muſt be attributed, as we ſay, to a wiſe and good God: or, as the Atheiſts averr, to dead, ſenſleſs Matter. They have contrived ſeveral tricks and *methods of Deceit*, one repugnant to another, to evade (if poſſible) this moſt cogent Proof of a Deity; All which I will propoſe and refute; and I hope to make it appear, that here, as indeed every where, but here certainly, in the great Dramatick Poem of Nature, is *dignus Deo vindice Nodus*, a neceſſity of introducing a God.

Μεθοδείας τ πλάνης. Eph. 4.14.

And firſt, I will anſwer what Exceptions they can have againſt Our Account: and ſecondly, I will confute all the Reaſons and Explications they can give of their own.

1. *Firſt*, I will anſwer what Exceptions they can have againſt Our account of the Production of

of Mankind. And they may object, That the Body it ſelf, though pretty good in its kind and upon Their *Hypotheſis*, nevertheleſs doth not look like the workmanſhip of ſo great a Maſter, as is pretended by Us; that Infinite Wiſdom and Goodneſs and Power would have beſtowed upon us more Senſes than five, or at leaſt theſe five in a much higher Perfection; that we could never have come out of the Hands of the Almighty, ſo ſubject to numerous Diſeaſes, ſo obnoxious to violent Deaths, and at beſt of ſuch a ſhort and tranſitory Life. They can no more aſcribe ſo ſorry an Effect to an Omniſcient Cauſe, than ſome ordinary piece of Clock-work with a very few motions and uſes, and thoſe continually out of order, and quickly at an end, to the beſt Artiſt of the Age. But to this we reply: *Firſt*, as to the Five Senſes; it would be raſh indeed to affirm, That God, though he had pleaſed, could not have endued us with more. But thus much we may averr, That though the Power of God be infinite and perfect, yet the Capacities of Matter are within limits and bounds. Why then doth the Atheiſt ſuſpect, that there may poſſibly be any more ways of Senſation, than what we have already? Hath he any Idea, or Notion, or Diſcovery of any more? So far from that, that he cannot make any addition or

progreſs in thoſe very Senſes he hath, further than they themſelves have informed him. He cannot imagine one new Colour, or Taſte, or Smell, beſide thoſe that have actually fallen under his reſpective Senſes. Much leſs can he that is deſtitute of an entire Senſe, have any Idea or Repreſentation of it; as one that is born Deaf hath no Notion of Sounds; or Blind, of Colours and Light. If then the Atheiſt can have no Imagination of more Senſes than five, why doth he ſuppoſe that a Body is capable of more? If we had double or triple as many, there might ſtill be the ſame ſuſpicion for a greater number without end; and therefore in both caſes 'tis equally unreaſonable and groundleſs. *Secondly* we affirm, that our Senſes have that degree of perfection, which is moſt fit and ſuitable to our Eſtate and Condition. If the *Eye* were ſo piercing, as to deſcry even opake and little objects a hundred Leagues off, it would do us little ſervice; it would be terminated by neighbouring Hills and Woods, or in the largeſt and eveneſt Plain by the very Convexity of the Earth: unleſs we could always inhabit the tops of Mountains and Cliffs, or had Wings too to fly aloft, when we had a mind to take a Proſpect. And if mankind had had Wings (as perhaps ſome extravagant Atheiſt may think us deficient in that)

all

all the world must have consented to clip them; or else Humane Race had been extinct before this time, nothing upon that supposition being safe from Murder and Rapine. Or if the *Eye* were so acute, as to rival the finest Microscopes, and to discern the smallest Hair upon the leg of a Gnat, it would be a curse and not a blessing to us; it would make all things appear rugged and deformed; the most finely polish'd Chrystal would be uneven and rough: The sight of our own selves would affright us: The smoothest Skin would be beset all over with ragged Scales, and bristly Hairs. And beside, we could not see at one view above what is now the space of an Inch, and it would take a considerable time to survey the then mountainous bulk of our own Bodies. Such a faculty of sight so disproportion'd to our other Senses and to the Objects about us would be very little better than Blindness it self. And again, God hath furnished us with invention and industry; so that by Optical Glasses we can more than supply that imaginary defect of our own Eyes; and discover more remote and minute Bodies with that assistance, than perhaps the most whimsical Atheist would desire to do without it. So likewise if our Sense of *Hearing* were exalted proportionably to the former, what a miserable condition would Mankind be

be in? what Whiſper could be low enough, but many would over hear it? what Affairs, that moſt require it, could be tranſacted with ſecrecy? and whither could we retire from perpetual humming and buzzing? every breath of Wind would incommode and diſturb us: we ſhould have no quiet or ſleep in the ſilenteſt nights and moſt ſolitary places; and we muſt inevitably be ſtricken Deaf or Dead with the noiſe of a clap of Thunder. And the like inconveniences would follow, if the Senſe of *Feeling* was advanc'd to ſuch a degree, as the Atheiſt requires. How could we ſuſtain the preſſure of our very Cloaths in ſuch a condition; much leſs carry burthens, and provide for conveniencies of Life? We could not bear the aſſault of an Inſect, or a Feather, or a puff of Air without pain. There are examples now of wounded perſons, that have roared for anguiſh and torment at the diſcharge of Ordnance, though at a very great diſtance; what inſupportable torture then ſhould we be under upon a like concuſſion in the Air, when all the whole Body would have the tenderneſs of a wound? In a word, all the Changes and Emendations, that the Atheiſts would make in our Senſes, are ſo far from being Improvements, that they would prove the utter Ruine and Extirpation of Mankind.

But

But perhaps they may have better ſucceſs in their complaints about the Diſtempers of the Body and the Shortneſs of Life. We do not wonder indeed, that the Atheiſt ſhould lay a mighty ſtreſs upon this Objection. For to a man that places all his Happineſs in the Indolency and Pleaſure of the Body, what can be more terrible than Pain or a Fit of Sickneſs? nothing but *Death* alone, the moſt dreadfull thing in the world. When an Atheiſt reflects upon Death, his very Hope is Deſpair; and 'tis the crown and top of his Wiſhes, that it may prove his utter Diſſolution and Deſtruction. No queſtion if an Atheiſt had had the making of himſelf, he would have framed a Conſtitution, that could have kept pace with his inſatiable Luſt, been invincible by Gluttony and Intemperance, and have held out vigorous a thouſand years in a perpetual Debauch. But we anſwer; *Firſt*, in the words of St. *Paul: Nay, but, O Man, who art thou, that replieſt againſt God? ſhall the thing formed ſay to him that formed it, Why haſt thou made me thus?* Ro. 9. 20. We adore and magnifie his moſt holy Name for his undeſerved mercy towards us, that he made us the Chief of the viſible creation; and freely acquit his Goodneſs from any imputation of Unkindneſs, that he has placed us no Higher. *Secondly*, Religion gives us a very good account of

of the preſent Infirmity of our Bodies. Man at his firſt Origin was a Veſſel of Honour, when he came firſt out of the Hands of the Potter; endued with all imaginable perfections of the Animal Nature; till by Diſobedience and Sin, Diſeaſes and Death came firſt into the world. *Thirdly*, The Diſtempers of the Body are not ſo formidable to a Religious man, as they are to an Atheiſt: He hath a quite different judgment and apprehenſion about them: he is willing to believe, that our preſent condition is better for us in the iſſue, than that uninterrupted Health and Security, that the Atheiſt deſires; which would ſtrongly tempt us to forget God and the concerns of a better Life. Whereas now he receives a Fit of Sickneſs, as the παιδεία τῦ πατρὸς, the kind Chaſtiſement and Diſcipline of his Heavenly Father, to wean his affections from the world, where he is but as on a Journey; and to fix his thoughts and deſires on things above, where his Country and his Dwelling is: that where he hath placed his *Treaſure* and Concerns, *there his heart may be alſo*. *Fourthly*, Moſt of the Diſtempers that are incident to us are of our own making, the effects of abuſed Plenty, and Luxury, and muſt not be charged upon our Maker; who notwithſtanding out of the Riches of his Compaſſion hath provided for us ſtore of excel-

lent

lent Medicines, to alleviate in a great measure those very Evils which we bring upon our selves. And now we are come to the last objection of the Atheist, That Life is too short. Alas for him, what pity 'tis that he cannot wallow immortally in his sensual Pleasures! If his Life were many whole Ages longer than it is, he would still make the same Complaint, *Brevis est hic fructus homullis.* For Eternity, and that's the thing he trembles at, is every whit as long, after a thousand years as after fifty. But Religion gives us a better prospect, and makes us look beyond the gloomy Regions of Death with Comfort and Delight: *When this corruptible shall put on incorruption, and this mortal put on immortality.* We are so far from repining at God, that he hath not extended the period of our Lives to the Longævity of the Antediluvians; that we give him thanks for contracting the days of our Trial, and receiving us more maturely into those Everlasting Habitations above, that he hath prepared for us. Lucret. l. 3.

And now that I have answer'd all the Atheist's Exceptions against Our account of the Production of Mankind, I come in the next place to examine all the Reasons and Explications they can give of their own.

The Atheists upon this occasion are divided

into Sects, and (which is the mark and character of Error) are at variance and repugnancy with each other and with themſelves. *Some* of them will have Mankind to have been thus from all Eternity. But the reſt do not approve of any infinite Succeſſions, but are poſitive for a beginning; and they alſo are ſubdivided into three Parties: the *firſt* aſcribe the Origin of Men to the Influence of the Stars upon ſome extraordinary Conjunction or Aſpect: Others again reject all Aſtrology; and *ſome* of theſe mechanically produce Mankind at the very firſt Experiment by the action of the Sun upon duly prepared Matter: but *others* are rather of opinion, that after infinite blundering and miſcarrying our Bodies at laſt happen'd and jump'd into this Figure by mere Chance and Accident. There's no Atheiſt in the world, that reaſons about his Infidelity (which God knows moſt of them never do) but he takes one of theſe *four* Methods. I will refute them every one in the ſame order that I have named them: the two former in the preſent Diſcourſe, reſerving the others for another occaſion.

1. And *Firſt*, the Opinion of thoſe Atheiſts that will have Mankind and other Animals to have ſubſiſted thus eternally in infinite Generations already paſt, will be found to be flat Nonſenſe and Contradiction to it ſelf; and repugnant alſo

alſo to matter of Fact. *Firſt*, it is contradiction to its ſelf. Infinite Generations of Men (they ſay) are already paſt and gone: but whatſoever is now paſt, was once actually preſent; ſo that each of thoſe Infinite Generations was once in its turn actually preſent: therefore all except One Generation were once future and not in being, which deſtroys the very ſuppoſition: For either that One Generation muſt it ſelf have been Infinite, which is nonſenſe; or it was the Finite beginning of Infinite Generations between it ſelf and us, which is, Infinity terminated at both ends, which is nonſenſe as before. *Again*, Infinite paſt Generations of Men have been once actually preſent: therefore there may be ſome one Man of them given, that was at infinite diſtance from *us* now: therefore that man's Son likewiſe, ſuppoſe forty years younger than his Father, was either at infinite diſtance from us or at finite: if that Son too was at infinite diſtance from us, then one Infinite is longer by forty years than another; which is abſurd: if at finite, then forty years added to finite makes it infinite, which is as abſurd as the other. And *again*, The number of men that are already dead and gone is infinite, as they ſay: but the number of the Eyes of thoſe men muſt neceſſarily be twice as much as that of the men themſelves, and that

of the Fingers ten times as much, and that of the Hairs of their Heads thouſands of times. So that we have here one Infinite number twice, ten times, and thouſands of times as great as another, which is contradiction again. Thus we ſee it is impoſſible in it ſelf, that any ſucceſſive duration ſhould be actually and poſitively infinite, or have infinite ſucceſſions already gone and paſt. Neither can theſe Difficulties be applied to the Eternal Duration of God Almighty. For though we cannot comprehend Eternity and Infinity; yet we underſtand what they are *not*. And ſomething, we are ſure, muſt have Exiſted from all Eternity; becauſe all things could not emerge and ſtart out of Nothing. So that if this præ-exiſtent Eternity is not compatible with a ſucceſſive Duration, as we clearly and diſtinctly perceive that it is not; then it remains, that ſome Being, though infinitely above our finite comprehenſions, muſt have had an identical, invariable Continuance from all Eternity; which Being is no other than God. For as his Nature is perfect and immutable without the *leaſt ſhadow of change*; ſo his Eternal Duration is permanent and indiviſible, not meaſurable by Time and Motion, nor to be computed by number of ſucceſſive moments. *One day with the Lord is as a thouſand years, and a thouſand years as one day.*

And

And *Secondly*, this Opinion of Infinite Generations is repugnant likewiſe to Matter of Fact. 'Tis a truth beyond oppoſition, that the univerſal Species of Mankind hath had a gradual increaſe, notwithſtanding what War, and Famine, and Peſtilence, and Floods, and Conflagrations, and the Religious Profeſſion of Celibacy, and other Cauſes, may at certain periods of time have interrupted and retarded it. This is manifeſt from the Hiſtory of the Jewiſh Nation, from the account of the Roman *Cenſus*, and Regiſters of our Own Country, where the proportion of Births to Burials is found upon obſervation to be yearly as Fifty to Forty. Now if Mankind do increaſe, though never ſo ſlowly, but one Couple ſuppoſe in an Age; 'tis enough to evince the falſhood of Infinite Generations already expired. For though an Atheiſt ſhould contend, that there were ten thouſand million couple of Mankind now in being, (that we may allow him multitude enough) 'tis but going back ſo many Ages, and we deſcend to a ſingle Original Pair. And 'tis all one in reſpect of Eternal Duration yet behind, whether we begin the world ſo many millions of Ages ago, or date it from the late *Æra* of about Six Thouſand years. And moreover this recent beginning of the world is further eſtabliſhed from the known Original of Empires and

Vide *Obſervations upon the Bills of Mortality.*

and Kingdoms, and the Invention of Arts and Sciences: whereas if infinite Ages of Mankind had already preceded, there could nothing have been left to be invented or improved by the ſucceſsfull induſtry and curioſity of our own. The Circulation of the Blood, and the Weight and Spring of the Air (which is as it were the Vital Pulſe and the great Circulation of Nature, and of more importance in all Phyſiology, than any one Invention ſince the beginning of Science) had never lain hidden ſo many myriads of Generations, and been reſerved for a late happy Diſcovery by two great Luminaries of this Iſland. I know the Atheiſt may endeavour to evade this by ſuppoſing, That though Mankind have been from everlaſting, and have perpetually encreas'd by generation; yet at certain great periods there may be univerſal Deluges, which may *not* wholly extinguiſh Mankind (for, they'll ſay, there is not Water enough in Nature for that) but may cover the Earth to ſuch a Height, that none but a few Mountainers may eſcape, enough to continue Humane Race; and yet being illiterate Ruſticks (as Mountainers always are) they can preſerve no Memoirs of former times, nor propagate any Sciences or Arts; and ſo the world muſt needs be thought by Poſterity to have begun at ſuch periods. But to this I anſwer, *Firſt*, That upon this

this ſuppoſition there muſt have been infinite Deluges already paſt: for if ever this Atheiſt admits of a firſt Deluge, he is in the ſame nooſe that he was. For then he muſt aſſert, That there were infinite generations and an infinite increaſe of mankind before that firſt Deluge; and then the Earth could not receive them, but the infinite Bodies of Men muſt occupy an infinite ſpace, and then all the Matter of the Univerſe muſt be humane Body, and other abſurdities that follow it, which are infinite too. But if he ſays, That there have been infinite Deluges heretofore, this is impoſſibility again; for all that I ſaid before againſt the Notion of infinite paſt Generations, is alike applicable to this. *Secondly*, ſuch Univerſal Deluges (ſeeing the Deity is now excluded) muſt be produced in a natural way: and therefore gradually, and not in an inſtant: and therefore (becauſe the tops of Mountains, they ſay, are never overflown) the civilized people may eſcape thither out of Villages and Cities; and conſequently, againſt the Atheiſt, Arts, and Sciences, and Hiſtories, may be preſerved, and derived to the ſucceeding world. *Thirdly*, Let us imagin the whole Terraqueous Globe with its Atmoſphere about it; What is there here, that can naturally effect an Univerſal Deluge? If you would drown one Country or Continent with

Rains

Rains and Inundations, you muſt borrow your Vapor and Water from ſome other part of the Globe. You can never overflow all at a time. If the Atmoſphere it ſelf was reduced into Water, (as ſome think it poſſible) it would not make an Orb above 32 foot deep, which would ſoon be ſwallowed up by the cavity of the Sea, and the depreſſed parts of the Earth, and be a very feeble attempt towards an Univerſal Deluge. But then what immenſe Weight is there above, that muſt overcome the expanſive force of the Air, and compreſs it into near the thouſandth part of the room that it now takes up? *We*, that acknowledge a God Almighty, can give an account of one Deluge, by ſaying it was miraculous; but it would be a little ſtrange to ſee an Atheiſt have recourſe to a Miracle; and that not once only, but upon infinite occaſions. But perhaps they may endeavour to prove the poſſibility of ſuch a natural Deluge, by borrowing an ingenious Notion, and pretending, That the face of Nature may be now quite changed from what it was; and that formerly the whole Collection of Waters might be an orbicular Abyſs, arched over with an exterior Cruſt or Shell of Earth; and that the breaking and fall of this Cruſt might naturally make a Deluge. I'll allow the Atheiſt all the fair play in the world. Let us ſuppoſe the

the Fall of this imaginary Cruſt. *Firſt*, It ſeems to be impoſſible, but that all the Inhabitants of this Cruſt muſt be daſh'd to pieces in its Ruins. So that this very Notion brings us to the neceſſity of a new production of Men; to evade which it is introduced by the Atheiſt. *Again*, If ſuch a Cruſt naturally fell, then it had in its own conſtitution a tendency towards a Fall; that is, it was more likely and inclinable to fall this thouſand years, ſuppoſe, than the laſt. But if the Cruſt was always gradually nearer and nearer to falling; that plainly evinces, that it had not endured eternally before its Fall. For let them aſſign any imaginable period for its falling, how could it have held out till then (according to the ſuppoſition) the unmeaſurable duration of infinite Ages before? And *again*, ſuch a Cruſt could fall but once; for what Architect can an Atheiſt ſuppoſe, to rebuild a new Arch out of the ruins of the other? But I have ſhewn before, that this Atheiſt hath need of infinite Deluges to effect his deſign; and therefore I'll leave him to contrive how to make infinite Cruſts one upon the back of another; and now proceed to examine in the ſecond place, The Aſtrological Explication of the Origin of Men.

2. If you ask one of this Party, what Evidence he is able to produce for the truth of his Art,

he may perhaps offer ſome Phyſical Reaſons for a general influence of the Stars upon terreſtrial bodies: but as Aſtrology is conſider'd as a Syſtem of Rules and Propoſitions, he will not pretend to give any reaſon of it *à priori*; but reſolves all that into Tradition from the *Chaldeans* and *Ægyptians*, who firſt learnt it by long obſervation, and tranſmitted it down to Poſterity; and that now it is daily confirmed by Events, which are experienced to anſwer the Predictions. This is all that can be ſaid for Aſtrology as an Art. So that the whole Credibility of this Planetary production of Mankind muſt depend upon Obſervation. But are they able to ſhew among all the Remains of the *Chaldaïck* Obſervations for four hundred and ſeventy thouſand years (as they pretended) any Tradition of ſuch a Production? So far from that, that the *Chaldeans* believed the world and mankind to have been from everlaſting, which opinion I have refuted before. Neither can the *Ægyptian* Wizards with their long Catalogue of Dynaſties, and Obſervations for innumerable Years, ſupply the Atheiſts with one inſtance of ſuch a Creation. Where are the fragments of *Petoſiris* and *Necepſo*, that may countenance this Aſſertion? I believe if they had had any example of men born out of the Soil, they would rather have aſcribed it to the

the fruitfull Mud of the *Nile* (as they did the breeding of Frogs, and Mice, and Monsters) than to the efficacy of Stars. But with the leave of these Fortune-tellers, did the Stars do this feat once only, which gave beginning to Humane Race? or have they frequently done so, and may do it again? If frequently, why is not this Rule deliver'd in *Ptolemy* and *Albumasar*? If once only at the beginning, then how came it to be discover'd? Who were there then in the world, to observe the Births of those First Men, and calculate their Nativities, as they sprawl'd out of Ditches? Those Sons of Earth were very wise Children if they themselves knew, that the Stars were their Fathers. Unless we are to imagine, that they understood the Planets and the Zodiack by instinct, and fell to drawing Schemes of their own Horoscopes, in the same Dust they sprung out of? For my part I can have no great veneration for *Chaldaïck* Antiquity; when I see they could not discover in so many thousand years, that the Moon was an opake Body, and received her Light from the Sun. But suppose their Observations had been never so accurate, it could add no Authority to modern Astrology,

So *Diodorus Siculus*, lib. 1. c. 2. Φασὶ τοίνυν Αἰγύπτιοι καὶ τὴν ἐξ ἀρχῆς τῶν ὅλων γένεσιν πρώτους τοὺς ἀνθρώπους γενέσθαι καὶ τῶν Αἰγυπτίων, διά τε τὴν εὐκρασίαν τῆς χώρας, καὶ διὰ τὴν φύσιν τοῦ Νείλου, &c.

Vitruvius, *lib.* 9. *c.* 4. Lucret. *lib.* 5. *Ut Babylonica Chaldæum doctrina, &c.* Apuleius *de Deo Socratis*: *Seu illa (Luna) proprio & perpeti fulgore, ut* Chaldæi *arbitrantur, parte luminis compos, parte altera cassa fulgoris.*

which is borrowed from the *Greeks*. 'Tis well known that *Beroſus*, or his Scholars, new modelled and adapted the *Babylonian* Doctrines to the *Grecian* Mythology. The ſuppoſed Influences of *Aries* and *Taurus* for example, have a manifeſt relation to the *Grecian* Stories of the Ram that carried *Phrixus*, and the Bull that carried *Europa*. Now which of theſe is the Copy, and which the Original? Were the Fables taken from the Influences, or the Influences from the Fables? the Poetical Fables, more ancient than all Records of Hiſtory; or the Aſtrological Influences, that were not known to the *Greeks* till after *Alexander* the Great? But without queſtion thoſe Fabulous Tales had been many a time told and ſung to lull children aſleep, before ever *Beroſus* ſet up his Intelligence-Office at *Coos*. And the ſame may be ſaid of all the other Conſtellations. Firſt, Poetry had filled the Skies with Aſteriſms and Hiſtories belonging to them; and then Aſtrology deviſes the feigned Virtues and Influences of each, from ſome property of the Image, or alluſion to the Story. And the ſame trifling futility appears in their XII Signs of the *Zodiack*, and their mutual Relations and Aſpects. Why no more Aſpects than diametrically oppoſite, and ſuch as make æquilateral figures? Why are the Maſculine and Feminine, the Fiery and Airy,

Airy, and Watry and Earthy Signs all placed at such regular distances? Were the Virtues of the Stars disposed in that order and rank, on purpose only to make a pretty Diagram upon Paper? But the Atheistical Astrologer is doubly pressed with this absurdity. For if there was no Counsel at the making of the world, how came the Asterisms of the same nature and energies to be so harmoniously placed at regular intervals? And how could all the Stars of one Asterism agree and conspire together to constitute an Universal? Why does not every single Star shed a separate influence; and have Aspects with other Stars of their own Constellation? But what need there many words? As if the late Discoveries of the Celestial Bodies had not plainly detected the imposture of Astrology? The Planet *Saturn* is found to have a great Ring that encircles him, and three lesser Planets that move about him, as the Moon doth about the Earth: and *Jupiter* hath four *Satellites*, which by their Interposition between him and us make some hundreds of Eclipses every year. Now the whole Tribe of Astrologers, that never dream'd of these Planets have always declared, that when *Jupiter* and *Saturn* come about again to any given Point, they exert (consider'd singly by them-

themſelves) the ſame Influence as before. But 'tis now manifeſt, that when either of them return to the ſame point; the Planets about them, that muſt make up an united Influence with them, have a different ſituation in reſpect of us and each other, from what they had the time before: and conſequently the joint Influence muſt be perpetually varied, and never be reducible to any Rules and Obſervations. Or if the Influences be conveyed hither diſtinct, yet ſometimes ſome of the Little Planets will eclipſe the Great one at any given point; and therefore intercept and obſtruct the Influence. I cannot now inſiſt on many other Arguments deducible from the late Improvements of Aſtronomy; For if the Earth be not the Centre of the Planetary Motions, what muſt become then of the preſent Agrology, which is wholly adapted to that vulgar *Hypotheſis?* And yet nevertheleſs, when they lay under ſuch wretched miſtakes for many Myriads of Years, if we are willing to believe them; they would all along, as now, appeal to Experience and Event for the confirmation of their Doctrins. That's the invincible Demonſtration of the Verity of the Science: And indeed as to their Predictions, I think our Aſtrologers may aſſume to themſelves that infallible Oracle of *Tireſias*,

O Laertiade, quicquid dico, aut erit, aut non.

There

There's but a true and a falſe in any telling of Fortune; and a man that never hits on the right ſide, cannot be called a bad Gueſſer, but muſt miſs out of deſign, and be notably skilfull at lighting on the wrong. And were there not formerly as great pretenſions to it from the ſuperſtitious obſervation of the Entrails of Cows, of the flying of Vulturs, and the pecking of Chickens? Nay, the old *Augurs* and *Southſayers* had better reaſon to profeſs the Art of Divining, than the modern Aſtrological Atheiſt: for They ſuppoſed there were ſome *Dæmons*, that directed the indications. So likewiſe the *Chaldean* and *Ægyptian* Aſtrologers were much more excuſable than He. It was the Religion of their Countries to worſhip the Stars, as we know from unqueſtionable Authority. They believed them Intelligent Beings, and no other than very Gods; and therefore had ſome Reaſon to ſuſpect, that they might govern Humane Affairs. The Influence of the Stars was in their apprehenſions no leſs than Divine Power. But an Atheiſt, that believes the Planets to be dark, ſolid and ſenſleſs Bodies, like the brute Earth he treads on; and

Maimonides More Nevochim *De Zabiis & Chaldæis* Plato *in* Cratylo. Diodorus, *lib.* 1. c. 2. Euſebius *Demonſt. Evangel. lib.* 1. *c.* 6. Φοίνικας τοιγαροῦν καὶ Αἰγυπτίους πρώτους ἁπάντων κατέχει λόγος ἥλιον καὶ σελήνην καὶ ἀστέρας θεοὺς ἀποφαίνειν.

and the Fixt Stars and the Sun to be inanimate Balls of Fire; what Reaſons can He advance for the credit of ſuch Influences? He acknowledgeth nothing beſides Matter and Motion; ſo that all that he can conceive to be tranſmitted hither from the Stars, muſt needs be perform'd either by Mechaniſm or Accident: either of which is wholly unaccountable, and the latter irreconcilable to any Art or Syſtem of Science. But if both were allowed the Atheiſt; yet as to any production of Mankind, they will be again refuted in my following Diſcourſe. I can preſerve a due eſteem for ſome great Men of the laſt Age, before the Mechanical Philoſophy was revived, though they were too much addicted to this nugatory Art. When Occult Quality, and Sympathy and Antipathy were admitted for ſatisfactory Explications of things, even wiſe and vertuous Men might ſwallow down any Opinion that was countenanced by Antiquity. But at this time of day, when all the general powers and capacities of Matter are ſo clearly underſtood; he muſt be very ridiculous himſelf, that doth not deride and explode the antiquated Folly. But we may ſee the miſerable Shifts that ſome men are put to; when that which was firſt founded upon, and afterward

ſuppor-

ſupported by *Idolatry*, is now become the tottering Sanctuary of *Atheiſm*. If the Stars be no Deities, Aſtrology is groundleſs: and if the Stars be Deities, why is the Aſtrologer an Atheiſt? He may eaſily be no Chriſtian; and 'tis difficult indeed to be both at once: becauſe, as I have ſaid before, Idolatry is at the bottom; and by ſubmitting Humane Actions and Inclinations to the Influence of the Stars, they deſtroy the very Eſſence of Moral Vertue and the Efficacy of Divine Grace: and therefore Aſtrology was juſtly condemn'd by the Ancient Fathers and Chriſtian Emperours. An Aſtrologer, I ſay, may very eaſily be no Chriſtian; he may be an Idolater or a Pagan: but I could hardly think Aſtrology to be compatible with rank Atheiſm; if I could ſuppoſe any great gifts of Nature to be, where either do reſide. But let him be what he will, he is not able to do much hurt by his Reaſons and Example. For Religion it ſelf, according to his Principles, is derived from the Stars. And he owns, 'tis not any juſt Exceptions he hath taken againſt Chriſtianity, but 'tis his Deſtiny and Fate; 'tis *Saturn* in the Ninth Houſe, and not Judgment and Deliberation, that made him an Atheiſt.

Concil. Laod. *Can.* 36 Conc. 6. in Trullo. *Can.* 61. Cod. Juſt. *lib.* 9. *tit.* 18. Cod. Theodoſ. *lib.* 9. *tit.* 16. Βασιλικῶν *lib.* 60. *tit.* 39.

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A

Confutation of Atheism

From the

Structure and Origin of Humane Bodies.

PART II.

A

SERMON

Preached at

St Mary-le-Bow,

June 6. 1692.

Being the *Fourth* of the Lecture Founded by the Honourable *ROBERT BOYLE*, Esquire.

By *RICHARD BENTLEY*, M. A.
Chaplain to the Right Reverend Father in God,
EDWARD, Lord Bishop of *Worcester.*

LONDON,
Printed for *Tho. Parkhurst* at the *Bible* and *Three Crowns* in *Cheapside*, and *H. Mortlock* at the *Phœnix* in St. *Paul's* Church-yard, 1692.

Imprimatur.

Ra. Barker, R^mo in Chriſto Patri ac D^no D^no *Johanni* Archiep. *Cantuar.* à Sacris Domeſt.

June 10.
1692.

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ACTS XVII. 27.

That they ſhould ſeek the Lord, if haply they might feel after him, and find him: though he be not far from every one of us; for in him we Live, and Move, and have our Being.

IN the former part of this Enquiry I have examin'd and refuted two Atheiſtical Notions oppoſed to the grand Doctrine of the Text, *That we owe our Living and Being to the power of God:* The one of the *Ariſtotelian* Atheiſts, who, to avoid the difficulties of the firſt production of Mankind, without the intervention of Almighty Wiſdom and Power, will have the Race to have thus continued without beginning by an eternal ſucceſſion of infinite paſt Generations; which Aſſertion hath been detected to be mere nonſenſe, and contradictory to it ſelf: The other of the Aſtrological undertakers, that would raiſe Men like Vegetables out of ſome fat and ſlimy ſoil well digeſted by the kindly heat of the Sun, and impregnated with the influence of the Stars upon ſome remarkable and periodical conjunctions: Which opinion hath been vamp'd up of late by *Cardan*

and *Ceſalpinus*, and other News-mongers from the Skies; a Pretence as groundleſs and ſilly, as the dreaming Oneirocriticks of *Artemidorus* and *Aſtrampſychus*, or the modern Chiromancy and Divinations of Gypſies.

I proceed now to the two remaining Paradoxes of ſuch Sects of Atheiſts, as laying aſide Aſtrology and the unintelligible Influence of Heavenly Bodies more than by their Gravity, and Heat, and Light, do either produce Mankind mechanically and neceſſarily from certain connexions of Natural Cauſes, or more dully and ſupinely, though altogether as reaſonably, reſolve the whole Buſineſs into the unaccountable ſhuffles and tumults of Matter, which they call Chance and Accident. But at preſent I ſhall only take an account of the ſuppoſed Production of Humane Bodies by Mechaniſm and Neceſſity.

The Mechanical or Corpuſcular Philoſophy, though peradventure the oldeſt, as well as the beſt in the world, had lain buried for many Ages in contempt and oblivion; till it was happily reſtored and cultivated anew by ſome excellent Wits of the preſent. But it principally owes its re-eſtabliſhment and luſtre, to that Honourable Perſon of ever Bleſſed Memory, who hath

hath not only ſhewn its uſefulneſs in Phyſiology above the vulgar Doctrines of Real Qualities and Subſtantial Forms; but likewiſe its great ſerviceableneſs to Religion it ſelf. And I think it hath been competently proved in a former Diſcourſe, how friendly it is to the Immateriality of Humane Souls, and conſequently to the Exiſtence of a Supreme Spiritual Being. And I may have occaſion hereafter to ſhew further, that all the Powers of Mechaniſm are intirely dependent on the Deity, and do afford a ſolid Argument for the Reality of his Nature. So far am I from the apprehenſion of any great feats, that this Mechanical Atheiſt can do againſt Religion. For if we conſider the Phænomena of that Material World with a due and ſerious attention, we ſhall plainly perceive, that its preſent frame and conſtitution and the eſtabliſhed Laws of Nature are conſtituted and preſerved by Gravitation alone. That is the powerfull cement, which holds together this magnificent ſtructure of the world; *Which ſtretcheth the North over the empty ſpace, and hangeth the Earth upon Nothing*; if we may transfer the words of *Job* from the firſt and real Cauſe to the ſecondary Agent. Without that the whole Univerſe, if we ſuppoſe an undetermin'd power of Motion Job 26. 7.

Motion infuſed into Matter, would have been a confuſed Chaos, without beauty or order, and never ſtable and permanent in any condition. Now it may be proved in its due place, that this Gravity, the great Baſis of all Mechaniſm, is not it ſelf Mechanical; but the immediate *Fiat* and Finger of God, and the Execution of the Divine Law; and that Bodies have not the power of tending towards a Centre, either from other Bodies or from themſelves: which at once, if it be proved, will undermine and ruine all the Towers and Batteries that the Atheiſts have raiſed againſt Heaven. For if no Compound Body in the viſible world can ſubſiſt and continue without Gravity, and Gravity do immediately flow from a Divine Power and Energy; it will avail them nothing, though they ſhould be able to explain all the particular Effects, even the Origination of Animals, by mechanical principles. But however at preſent I will forbear to urge this againſt the Atheiſt. For, though I ſhould allow him, that this Catholick Principle of Gravitation is eſſential to Matter without introducing a God; yet I will defy him to ſhew, how a Humane Body could be at firſt produced naturally, according to the preſent Syſtem of things, and the mechanical affections of Matter. And

And becauſe this Atheiſt profeſſeth to believe as much as we; that the firſt production of Mankind was in a quite different manner from the preſent and ordinary method of Nature, and yet affirms nevertheleſs, that That was Natural too; which ſeems at the firſt ſight to be little leſs than a contradiction: It ſhould lie upon him to make out, how matter by undirected Motion could at firſt neceſſarily fall, without ever Erring or Miſcarrying, into ſuch a curious formation of Humane Bodies; a thing that by his own confeſſion it was never able to do ſince, or at leaſt hath not done for ſome thouſands of years: to declare to us what ſhape and contexture Matter then had, which it cannot have now: how it came to be altered by long courſe of time, ſo that living Men can no more be produced out of putrefaction in the primary way; and yet the ſpecies of Mankind, that now conſiſts of and is nouriſhed by Matter ſo altered, ſhould continue to be the ſame as it was from the beginning. He ſhould undertake to explain to us the firſt ſteps and the whole progreſs of ſuch a formation; at leaſt by way of *Hypotheſis*, how it naturally might have been, though he did not affirm that it was actually ſo. Whether he hath a new Notion

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tion peculiar to himself about that Production, or takes up with some old one, that is ready at hand: whether that most witty Conceit of *Anaximander*, That the first Men and all Animals were bred in some warm moisture, inclosed in crustaceous skins, as it were various kinds of Crabfish and Lobsters; and so they continued, till they had arrived at perfect age; when their shelly Prisons growing dry and breaking made way for their liberty: or the no less ingenious opinion of the great *Empedocles*; That Mother Earth first brought forth vast numbers of Legs, and Arms, and Heads, and the other members of the Body scatter'd and distinct, and all at their full growth; which coming together and cementing (as the pieces of Snakes and Lizards have been said to do, if one cuts them asunder) and so configuring themselves into Humane shape, made lusty proper men of thirty years age in an instant: or rather the divine Doctrine of *Epicurus* and the *Ægyptians*; That there first grew up a sort of Wombs, that had their Roots in the Earth, and attracted thence a kind of Milk for the nourishment of the inclosed *Fœtus*; which at the time of maturity broke through those Membranes, and shifted for themselves. I say, he ought

Plutarch. *de Plac. Phi.* lib. 5. c. 19. & *Sympos.* l. 8. c. 8. Censorinus *de die Natali* cap. 4.

Plutarch. *de Plac. Phil.* 5. 19. Censorin. *ibidem.*

Censorinus. *ibid.* Lucret. lib 5. Diodorus Siculus, *lib.* 1. *c* 2.

ought to acquaint us which of theſe he is for, or bring a new explication of his own; and not require *Us* to prove the Negative, That a Spontaneous production of Mankind, neither warranted by example, nor defended by reaſon, nevertheleſs may not *poſſibly* have been true. This is a very unreaſonable demand, and we might juſtly put him off with ſuch an anſwer as this; That there are ſeveral things, which all men in their wits do disbelieve, and yet none but madmen will go about to diſprove. But to ſhew him how much we endeavour to ſatisfy and oblige him, I will venture once for his ſake to incurr the cenſure of ſome perſons for being elaborately trifling. For with reſpect to the moſt of Mankind, ſuch wretched abſurdities are more wiſely contemn'd than confuted, and to give them a ſerious anſwer, may only make them look more conſiderable.

Firſt then, I take it for granted by him, That there were the ſame Laws of Motion, and the like general Fabrick of the Earth, Sea and Atmoſphere, at the beginning of Mankind, as there are at this day. For if any Laws at firſt were once ſettled and conſtituted; like thoſe of the *Medes* and *Perſians*, they are never to be reverſed. To violate and infringe them, is the ſame

as what we call Miracle; and doth not ſound very Philoſophically out of the mouth of an Atheiſt. He muſt allow therefore, that Bodies were endowed with the ſame affections and tendencies then as ever ſince, and that if an *Axhead* be ſuppoſed to float upon water, which is ſpecifically much lighter than it; it had been ſupernatural at that time, as well as in the days of *Eliſha*. And this is all that I deſire him to acknowledge at preſent. So that he may admit of thoſe Arguments as valid and concluſive againſt his *Hypotheſis*, that are fairly drawn from the preſent powers of Matter, and the viſible conſtitution of the World.

2 K. 5.6.

Now that we may come to the point; All Matter is either Fluid or Solid, in a large acceptation of the words, that they may comprehend even all the middle degrees between extreme Fixedneſs and Coherency, and the moſt rapid inteſtine motion of the Particles of Bodies. Now the moſt cavilling Atheiſt muſt allow, that a ſolid inanimate Body, while it remains in that ſtate, where there is none, or a very ſmall and inconſiderable change of Texture, is wholly incapable of a vital production. So that the firſt Humane Body, without Parents and without a Creator, if ſuch an one ever was, muſt have

have naturally been produced in and constituted by a Fluid. And because this Atheist goes mechanically to work; the universal Laws of Fluids must have been rigidly observed during the whole process of the Formation. Now this is a Catholick Rule of Staticks; That if any Body be bulk for bulk heavier than a Fluid, it will sink to the bottom of that Fluid; and if lighter, it will float upon it; having part of it self extant, and part immersed to such a determinate depth, as that so much of the Fluid as is equal in Bulk to the immersed part, be equal in Gravity to the whole. And consequently if several portions of one and the same Fluid have a different specifick gravity, the heavier will always (in a free vessel) be gradually the lower; unless violently shaken and blended together by external concussion. But that cannot be in our present case. For I am unwilling to affront this Atheist so much, as to suppose him to believe, that the first organical Body might possibly be effected in some Fluid portion of Matter, while its Heterogeneous parts were jumbled and confounded together by a Storm, or Hurricane, or Earthquake. To be sure he will rather have the primitive Man to be produced by a long process in a kind of digesting *Balneum*, where all the heavier Lees

Archimedes *de Insidentibus humido, lib.* 1. Stevin *des Elements Hydrostatiques.*

may have time to ſubſide, and a due *Æquilibrium* be maintain'd, not diſturb'd by any ſuch rude and violent ſhogs, that would ruffle and break all the little *Stamina* of the *Embryon*, if it were a making before. Now becauſe all the parts of an undiſturbed Fluid are either of equal Gravity, or gradually placed and ſtoried according to the differences of it; any concretion that can be ſuppoſed to be naturally and mechanically made in ſuch a Fluid, muſt have a like ſtructure of its ſeveral parts; that is, either be all over of a ſimilar Gravity, or have the more ponderous parts nearer to its Baſis. But there need no more conceſſions than this, to extinguiſh theſe ſuppoſed Firſt-born of Nature in their very formation. For ſuppoſe a Humane Body to be a forming in ſuch a Fluid in any imaginable poſture, it will never be reconcilable to this Hydroſtatical Law. There will be always ſomething lighter beneath, and ſomething heavier above; becauſe Bone, or what is then the Stuff and Rudiments of Bone, the heavieſt *in ſpecie*, will be ever in the midſt. Now what can make the heavier particles of Bone aſcend above the lighter ones of Fleſh, or depreſs theſe below thoſe, againſt the tendency of their own Nature? This would be wholly as miraculous, as the ſwimming

ming of Iron in Water at the command of *Eliſha*: and as impoſſible to be, as that the Lead of an Edifice ſhould naturally and ſpontaneouſly mount up to the Roof, while lighter materials employ themſelves beneath it: or that a Statue, like that in *Nebuchadnezzar*'s Viſion, whoſe Head was of fine and moſt ponderous Gold, and his Feet of Iron and Clay, ſhould mechanically erect it ſelf upon them for its Baſis.

Secondly, Becauſe this Atheiſt goes mechanically to work, he will not offer to affirm, That all the parts of the *Embryon* could according to his explication be formed at a time. This would be a ſupernatural thing, and an effectual refutation of his own Principles. For the Corpuſcles of Matter having no conſciouſneſs of one anothers acting (at leaſt before or during the Formation; as will be allowed by that very Atheiſt, that attributes Reaſon and Perception to them, when the Formation is finiſhed) they could not conſent and make a compact together, to carry on the work in ſeveral places at once; and one party of them be forming the Brain, while another is modelling the Heart, and a third delineating the Veins. No, there muſt be, according to Mechaniſm, a ſucceſſive and gradual operation: Some few Particles muſt

muſt firſt be united together, and ſo by appoſition and mutual connexion ſtill more and more by degrees, till the whole Syſtem be completed: and a Fermentation muſt be excited in ſome aſſignable place, which may expand it ſelf by its Elaſtical power; and break through, where it meets with the weakeſt reſiſtance; and ſo by that ſo ſimple and mechanical action, may excavate all the various Ducts and Ventricles of the Body. This is the only general account, as mean as it appears to be, that this Machin of an Atheiſt can give of that *fearfull and wonderfull* Production. Now to confute theſe Pretences, *Firſt*, There is that viſible Harmony and Symmetry in a Humane Body, ſuch a mutual communication of every veſſel and member of it, as gives an intrinſick evidence; that it was not formed ſucceſſively, and patch'd up by piecemeal So uniform and orderly a ſyſtem with innumerable Motions and Functions, all ſo placed and conſtituted, as never to interfere and claſh one with another, and diſturb the Oeconomy of the whole, muſt needs be aſcribed to an Intelligent Artiſt; and to ſuch an Artiſt, as did not begin the matter unprepared and at a venture; and when he was put to a *Nonplus*, pauſe and heſitate, which way he ſhould proceed;

ceed; but he had first in his comprehensive Intellect a complete *Idea* and Model of the whole Organical Body, before he enter'd upon the Work. But *Secondly*, if they affirm, That mere Matter by its mechanical Affections without any design or direction could form the Body by steps and degrees; what member then do they pitch upon for the foundation, and cause of all the rest? Let them shew us the beginning of this Circle; and the first Wheel of this Perpetual Motion. Did the Blood first exist, antecedent to the formation of the Heart? But that is to set the Effect before the Cause: because all the Blood that we know of, is made in and by the Heart, having the quite different form and qualities of Chyle, before it comes thither. Must the Heart then have been formed and constituted, before the Blood was in being? But here again, the Substance of the Heart it self is most certainly made and nourished by the Blood, which is conveyed to it by the Coronary Arteries. And thus it is through the whole system of the Body; every member doth mutually sustain and supply one another; and all are coætaneous, because none of them can subsist alone. But they will say, That a little Ferment first making a Cavity, which became the left Ventricle of the Heart, did thence further expand it self, and

Cartesius *de Formatione Fœtûs.*

and thereby delineate all the Arteries of the Body. Now if ſuch a ſlight and ſorry buſineſs as that, could produce an Organical Body; one might reaſonably expect, that now and then a dead lump of Dough might be leven'd into an Animal: for there a like Ferment makes notable Tumors and Ventricles; beſides ſundry long and ſmall Chanels, which may paſs tolerably well for Arteries and Veins. But I pray, in this ſuppoſed Mechanical Formation, when the Ferment was expanded to the extremities of the Arteries, if it ſtill had any elaſtical force remaining, why did it not go on and break through the Receptacle, as other Ferment muſt be allowed to have done at the Mouth and the Noſtrils? There was as yet no membranous Skin formed, that might ſtop and repell it. Or if the force of it was ſpent, and did not wheel about and return; what mechanical cauſe then ſhall we aſſign for the Veins? for this Ferment is there ſuppoſed to have proceeded from the ſmall capillary extremities of them to the Great Vein and the Heart; otherwiſe it had made Valves which would have ſtopp'd its own paſſage. And why did that Ferment, that at firſt diſperſed it ſelf from the Great Artery into infinite little ramifications, take a quite contrary method in the making of the Veins, where innumerable little

little Rivulets have their confluence into the Great Vein, the common chanel of the Blood? Are ſuch oppoſite motions both equally mechanical, when in both caſes the Matter was under the ſame modification? And *again*, When the firſt Ferment is excited, and forms the left Ventricle; if the Fluid Matter be uniform and of a ſimilar texture, and therefore on all ſides equally reſiſt the Expanſion; then the Cavity muſt continue One, dilated more and more, 'till the expanſive force and the uniform reſiſtance be reduced to an equality, and ſo nothing at all can be formed by this Ferment, but a ſingle round Bubble. And moreover this Bubble (if that could make a Heart) by reaſon of its comparative Levity to the Fluid that incloſes it, would neceſſarily aſcend to the top; and conſequently we ſhould never find the Heart in the midſt of the Breaſt. But if the Fluid be ſuppoſed to conſiſt of Heterogeneous Particles, then we cannot conceive how thoſe diſſimilar parts ſhould have a like ſituation in two ſeveral Fluids, when the Ferment begins. So that upon this ſuppoſition there could be no Species of Animals, nor any Similitude between them: One would have its Lungs, where another hath its Liver, and all the other Members præpoſterouſly placed;

there could not be a like Configuration of Parts in any two Individuals. And *again*, What is that which determins the Growth of all living Creatures? What principles of Mechaniſm are ſufficient to explain it? Why do not all Animals continually increaſe in bigneſs during the whole ſpace of their Lives, as it is reported of the Crocodile? What ſets a bound to their ſtature and dimenſions? and if we ſuppoſe a Bound and *Ne plus ultra* to be mechanically fixed, why again ſo great a variety in the Bulk of the ſeveral Kinds? why alſo ſuch Conſtancy obſerved in that manifold Variety? For as ſome of the largeſt Trees have Seeds no bigger or leſs than ſome diminutive Plants, and yet every Seed is a perfect Plant with Trunk and Branches and Leaves incloſed in a Shell: So the firſt *Embryon* of an Ant is ſuppoſed by inquiſitive Naturaliſts to be as big, as that of an Elephant, and to promiſe as fair at its primitive Formation for as ſpacious a Body: which nevertheleſs by an immutable Decree can never arrive to the millionth part of the others Bulk. And what modification of the firſt liquid Matter can vary ſo much, as to make one Embryon capable of ſo prodigiouſly vaſt augmentation, while another is confined to the minuteneſs of an Inſect? Is not this manifeſtly a Divine Sanction, that

Swammerdam *Hiſtor. Inſect. p.* 3.

that hath fixed and determin'd the Shape, the Stature, the Appetites, and the Duration of all Creatures in the World? Hither muſt we have recourſe in that great and myſterious Affair of an Organical Formation: And I profeſs that I cannot diſcern one ſtep in the whole, that is agreeable to the natural Laws of Motion. If we conſider the Heart, which is ſuppoſed to be the firſt principle of Motion and Life, and mentally divide it into its conſtituent Parts, its Arteries and Veins and Nerves and Tendons and Membranes, and the innumerable little Fibres, that theſe Secondary Parts do conſiſt of; we ſhall find nothing here Singular, but what is in any other Muſcle of the Body. 'Tis only the Site and Poſture of theſe ſeveral Parts and the Configuration of the whole, that give it the Form and Functions of a Heart. Now why ſhould the firſt ſingle Fibres in the Formation of the Heart be peculiarly drawn in Spiral Lines; when the Fibres of all other Muſcles are made by a tranſverſe rectilinear Motion? What could determin the Fluid Matter into that odd and ſingular Figure, when as yet no other Member is ſuppoſed to be form'd, that might deſign the Orbit of its Courſe? Let Mechaniſm here make an Experiment of its Power, and produce a ſpiral and turbinated motion of the whole

moved Body without an external Director. When all the Organs are once framed by a ſupernatural and divine Principle, we do willingly admit of Mechaniſm in many Functions of the Body: but that the Organs themſelves ſhould be mechanically formed, we conceive it to be impoſſible and utterly inexplicable. And if any Atheiſt will give a clear and philoſophical account of the things that are here touch'd upon; he may then hear of many more and perhaps more difficult than theſe, which their unfitneſs for a popular Auditory, and the remaining Parts of my Subject, that preſs forward to be treated of, oblige me now to omit.

But as the Atheiſt, when he is put to it to explain, How any Motion of dead Matter can beget Thought and Perception, will endeavour to defend his baffled Impiety with the inſtance of Brutes, which he calls Thinking Machines: ſo will he now alſo appeal from the Arbitration of Reaſon in the Caſe of Animal Productions, to Example and Matter of Fact. He will declame to us about the admirable Structure of the Bodies of Inſects; that they have all the Vital Parts, which the largeſt of Quadrupeds and even Man himſelf can boaſt of; whoſe Fabrick they the rather excell in his opinion, for that

that very Minuteneſs, that makes them contemptible: and that one would be apt to imagin, that theſe elegant and elaborate little Engines were all now propagated by Generation, and at firſt produced by ſome Divine Wiſdom and Power; if we did not find by experience, that they are the eaſie and obvious Products of unintelligent Nature, that ſpontaneouſly and mechanically forms them out of putrefied Carcaſſes and the warm moiſture of the Soil: and yet (which is mightily to his purpoſe) that theſe Inſects, ſo begotten without Parents, have nevertheleſs fit Organs of Generation and Difference of Sex, and can propagate their own kinds, as if themſelves had been born ſo too: and that if Mother Earth in this her barrenneſs and decrepitneſs of Age can procreate ſuch ſwarms of curious Engins, which not only themſelves enjoy their portion of Life, but by a moſt wonderfull Inſtinct impart it to many more, and continue their Species: might ſhe not in the flower of her Youth, while ſhe was ſucculent and fertil, have produced Horſes and Elephants and even Mankind it ſelf, the largeſt and perfecteſt Animals, as eaſily as in this parched and ſteril condition ſhe can make a Frog or an Inſect? Thus he thinks, he hath made out from Example and Analogy, that at the Beginning

of

of things every Species of Animals might ſpring mechanically out of the Soil without an Intelligent Creator. And indeed there is no one thing in the World, which hath given ſo much Countenance and Shadow of Poſſibility to the Notion of Atheiſm, as this unfortunate miſtake about the æquivocal generation of Inſects: And as the oldeſt Remains of Atheiſtical Writings are charged full with that Compariſon; ſo it is the main refuge of thoſe, that in this and the laſt Age have had the Folly and Impudence to appear in ſo wretched a Cauſe.

Now to this laſt Subterfuge of the Mechanical Atheiſts we can occurr ſeveral ways. And at preſent we affirm, *Firſt*, *ex abundanti*, That though we ſhould allow them the ſpontaneous production of ſome minute Animals, yet a like primitive Origination of Mankind could not thence be concluded. Becauſe they firſt tacitly ſuppoſe, that there is an univerſal decay of Moiſture and Fertility in the Earth. And they cannot avoid the neceſſity of ſo doing: For if the Soil be as fruitfull now, as it was in the beginning; why would it not produce Men, and the nobler kinds of Beaſts in our days too, if ever it did ſo? So that if that ſuppoſition be evinced to be erroneous and groundleſs, all the Arguments that they build upon it, will be ſub-

ſubverted at once. Now what more eaſily refuted, than that old vulgar Aſſertion of an univerſal Drought and Exſiccation of the Earth? As if the Sun could evaporate the leaſt drop of its Moiſture, ſo that it ſhould never deſcend again, but be attracted and elevated quite out of the Atmoſphere? 'Tis now a matter agreed and allowed by all competent Judges, that every Particle of Matter is endowed with a Principle of Gravity, whereby it would deſcend to the Centre, if it were not repelled upwards by heavier bodies. So that the ſmalleſt Corpuſcle of Vapour, if we ſuppoſe it to be exhaled to the top of the Atmoſphere, thence it muſt come down again, or at leaſt muſt there remain incumbent upon others: for there's either nothing or nothing heavier above it to protrude it any higher, neither can it ſpontaneouſly mount any more againſt the tendency of its nature. And leſt ſome ignorant Atheiſt ſhould ſuſpect, that peradventure there may be no ſuch Top of the Atmoſphere; but that it may be continued on to the Sun or to indefinite Space: he muſt vouchſafe to be inſtructed, That the whole weight of any Column of the Atmoſphere, and likewiſe the Specifick gravity of its Baſis are certainly known by many Experiments; and that by this computation (even making allowance

ance for its gradually larger Expanſion, the higher we go,) the very top of any Pillar of Air is not One hundred Miles diſtant from the Surface of the Earth. So that hence it is manifeſt, that the whole Terraqueous Globe with its Atmoſphere cannot naturally have loſt the leaſt particle of Moiſture, ſince the foundation of the World. But ſtill they may inſiſt, That although the whole Globe cannot be deprived of any of its Moiſture, yet the habitable Earth may have been perpetually the drier, ſeeing it is aſſiduouſly drained and exhauſted by the Seas. But to this we reply, That the very contrary is demonſtrable; That the longer the World ſhall continue, the Moiſter will be the whole Aggregate of the Land. For (to take no notice of the ſupply of its moiſture by Rains and Snow and Dews and Condenſation of Vapours, and perhaps by ſubterraneous paſſages) the tops of Mountains and Hills will be continually waſhed down by the Rains, and the Chanels of Rivers corroded by the Streams; and the Mud that is thereby conveyed into the Sea will raiſe its bottom the higher; and conſequently the Declivity of Rivers will be ſo much the leſs; and therefore the Continents will be the leſs drain'd, and will gradually increaſe in Humidity from the firſt period of their Duration

tion to their final Conſummation of all things: if a Divine Power do not interpoſe and change the ſettled courſe and order of Nature.

But let us allow their ſuppoſition, That the Total of the dry Land may have been robbed of ſome of its Moiſture which it had at its firſt Conſtitution: yet ſtill there are ſome parts of the Earth ſufficiently ſoak'd and water'd, to produce, if ever, thoſe Senſitive and Locomotive and Intelligent Plants. For do not the *Nile*, and the *Niger*, and the *Ganges*, and the *Menam*, make yearly Inundations in our days, as they have formerly done? And are not the Countries ſo overflown ſtill ſituate between the Tropicks under the direct and moſt vigorous Rays of the Sun, the very place where theſe Mechanical Atheiſts lay the Scene of that great Tranſaction? So that if Mankind had ever ſprung naturally out of the Soil, the Experiment would ſucceed now every year in *Æthiopia* and *Siam*; where are all the requiſite qualifications, that ever have been, for ſuch a production. And *again*, if there hath been ſuch a gradual diminution of the Generative Faculty of the Earth, that it hath dwindled from nobler Animals to puny Mice and Inſects; why was there not the like decay in the production of

Vegetables? We ſhould have loſt by this time the whole Species of Oaks and Cedars and the other tall and lofty Sons of the Foreſt, and have found nothing but dwarfiſh Shrubs and creeping Moſs and deſpicable Muſhroms. Or if they deny the preſent ſpontaneous production of larger Plants, and confine the Earth to as Pigmie Births in the Vegetable Kingdom, as they do in the other: yet ſurely in ſuch a ſuppoſed univerſal decay of Nature, even Mankind it ſelf that is now nouriſhed (though not produced) by the Earth, muſt have degenerated in Stature and Strength in every Generation. And yet we have certain demonſtration from *Ægyptian* Mummies, and *Roman* Urns and Rings and Meaſures and Ædifices and many other Antiquities, that Human Stature has not diminiſhed for above Two Thouſand years. Now if the Decay hath not been conſtant and gradual, there hath been no Decay at all; or at leaſt no natural one, nor what may be accounted for by this Mechanical Atheiſt. I conclude therefore, That although we ſhould allow the ſpontaneous production of Inſects; yet no Argument can be deduced from thence for a like Origination of Mankind.

But,

But, *Secondly*, we affirm, That no Insect or Animal did ever proceed æquivocally from Putrefaction, unless in Miraculous Cases, as in *Ægypt* by the Divine Judgments; but all are generated from Parents of their own Kind, Male and Female: a Discovery of that great Importance, that perhaps few Inventions of this Age can pretend to equal Usefulness and Merit; and which alone is sufficient (if the Vices of Men did not captivate their Reason) to explode and exterminate rank Atheism out of the World. For if all Animals be propagated by Generation from Parents of their own Species, and there be no instance in Nature of even a Gnat or a Mite either now or in former Ages spontaneously produced *de novo*: how came there to be such Animals in Being, and whence could they proceed? There is no need of much study and deliberation about it: for either they have existed eternally by infinite Successions already gone and past, which is in its own Notion absurd and impossible; or their Origin must be ascribed to a Supernatural and Divine Power, that formed and created them. Now to prove our assertion about the Seminal production of all living Creatures; that we may not repeat the Reasons which we have offer'd before against

See the Former Sermon.

the first Mechanical Formation of Human Bodies, which are equally valid against the spontaneous Origin of the minutest Insects; we appeal to Observation and Experiment, which carry the strongest conviction with them, and make the most sensible and lasting impressions. For whereas it hath been the general Tradition and Belief, that Maggots and Flies breed in putrefied Carcasses, and particularly Bees come from Oxen, and Hornets from Horses, and Scorpions from Crabfish, *&c.* all is now found to be Fable and Mistake. That sagacious and learned Naturalist *Francisco Redi* made innumerable trials with the putrid Flesh of all sorts of Beasts and Fowls and Fishes and Serpents, with corrupted Cheese and Herbs and Fruits and even Insects themselves: and he constantly found, that all those Kinds of Putrefaction did only afford a Nest and Aliment for the Eggs and Young of those Insects that he admitted to come there; but produced no Animal of themselves by a spontaneous Formation. For when he suffer'd those things to putrefie in Hermetically sealed Glasses, and Vessels close cover'd with Paper; and not only so, lest the Exclusion of the Air might be supposed to hinder the Experiment; but in Vessels cover'd with

Ἵπποι μὲν σφηκῶν γένεις, τοὺς δὲ μελισσῶν. Nicander.

Redi *De generatione insectorum.*

with fine Lawn, ſo as to admit the Air and keep out the Inſects: no living thing was ever produced there, though he expoſed them to the action of the Sun, in the warm Climate of *Florence*, and in the kindeſt ſeaſon of the year. Even Flies cruſh'd and corrupted, when incloſed in ſuch Veſſels, did never procreate a new Fly: though there, if in any caſe, one would have expected that ſucceſs. And when the Veſſels were open, and the Inſects had free acceſs to the Aliment within them, he diligently obſerved, that no other Species were produced, but of ſuch as he ſaw go in and feed and depoſit their Eggs there: which they would readily do in all Putrefaction; even in a mucilage of bruiſed Spiders, where Worms were ſoon hatch'd out of ſuch Eggs, and quickly changed into Flies of the ſame kind with their Parents. And was not that a ſurprizing Tranſformation indeed, if according to the vulgar opinion thoſe dead and corrupted Spiders ſpontaneouſly changed into Flies? And thus far we are obliged to the diligence of *Redi*: from whence we may conclude, That no dead Fleſh nor Herbs nor other putrefied Bodies, nor any thing that hath not then actually either a vegetable or animal Life can produce any Inſect.

And

And if we ſhould allow, as he did, that every Animal and Plant doth naturally breed and nouriſh by its ſubſtance ſome peculiar Inſect: yet the Atheiſt could make no advantage of this Conceſſion as to a like Origination of Mankind. For ſurely 'tis beyond even an Atheiſt's Credulity and Impudence, to affirm that the firſt Men might proceed out of the Galls and Tumors of Leaves of Trees, as ſome Maggots and Flies are ſuppoſed to do now; or might grow upon Trees, as the ſtory goes about Barnacles; or perhaps might be the Lice of ſome vaſt prodigious Animals, whoſe Species is now extinct. But though we ſuppoſe him guilty of ſuch an extravagant folly, he will only ſhift the difficulty, and not wholly remove it; for we ſhall ſtill expect an account of the ſpontaneous Formation of thoſe mountainous kind of Animals and Men-bearing Trees. And as to the Worms that are bred in the Inteſtines and other inward parts of Living Creatures, their production is not material to our preſent enquiry, till ſome Atheiſt do affirm, that his own Anceſtors had ſuch an Original. I ſay, if we ſhould allow this conceſſion of *Redi*, it would do no ſervice to our Adverſaries: but even here alſo they are defeated

ted by the happy curiosity of *Malpighi* and others, who observed and discovered, That each of those Tumors and Excrescences of Plants, out of which generally issues a Fly or a Worm, are at first made by such Insects, which wound the tender buds with a long hollow Trunk, and deposit an Egg in the hole with a sharp corroding liquor, which causeth a swelling in the leaf, and so closeth the orifice: and within this Tumor the Worm is hatcht and receives its aliment, till it hath eat its way through. Neither need we recurr to an æquivocal production of Vermin in the *Phthiriasis* and in *Herod's* Disease, who was σκωληκόβρωτος, *eaten of worms*, or maggots. Those horrible distempers are always accompanied with putrefying ulcers; and it hath been observed by the most accurate *Lewenhoeck*, that Lice and Flies, which have a most wonderfull instinct and acuteness of sense to find out convenient places for the hatching and nourishment of their young, do mightily endeavour to lay their Eggs upon Sores; and that one will lay above a hundred Eggs, and may naturally increase to some hundreds of thousands in a quarter of a year: which gives a full and satisfactory account of the *Phænomena* of those Diseases. And whereas it

Malpighius *de Galla*, Swammerdam *de gen. Insect.* Lewenhoeck *Epistol.*

Act. 12. 23.

Continuat. Epistol. p. 101.

is

is ſaid, *Exod.* 16. *v.* 20. That ſome of the *Iſraelites left of the Manna until the morning, and it bred worms and ſtank*; which an Atheiſt may make an objection, as either againſt us, or againſt the truth of the Scriptures: I underſtand it no otherwiſe, than that the Manna was *fly-blown*. It was then the Month of *October*, which in that Southern Climate, after the preceding Autumnal Rains, doth afford a favourable ſeaſon and copious nutriment for infinite ſwarms of Inſects. Neither do I aſcribe it to a miraculous power, that ſome of the Manna ſhould breed worms, but that all the reſt ſhould be preſerved ſound and untainted. And if any one ſhall rigidly urge the literal expreſſion of *breeding*; he muſt give leave to ſpeak in the language of the Vulgar in common affairs of life. We do now generally believe the *Copernican* Syſtem; yet I ſuppoſe upon ordinary occaſions we ſhall ſtill uſe the popular terms of Sun-riſe and Sun-ſet, and not introduce a new pedantick deſcription of them from the motion of the Earth. And then as to the vulgar opinion, That Frogs are made in the Clouds and brought down by the Rains, it may be thus eaſily refuted: for at that very inſtant, when they are ſuppoſed to deſcend,

you

you may find by dissection not only their Stomachs full of meat, but their Intestines full of excrement: so that they had lurked before in the day-time in holes and bushes and grass, and were then invited abroad by the freshness of a Shower. And by this time we may understand, what credit and authority those old Stories ought to have about monstrous productions in *Ægypt* after the inundation of the *Nile*, of Mice and Frogs and Serpents, half flesh and half mud; nay of the Legs, and Arms, and other Limbs of Men, & *quicquid Græcia mendax*; altogether as true, as what is seriously related by *Helmont*, That foul Linen, stopt in a vessel that hath Wheat in it, will in 21 days time turn the Wheat into Mice: which without conjuring one may guess to have been the philosophy and information of some Housewife, who had not so carefully cover'd her wheat, but that the Mice could come at it, and were there taken napping, just when they had made an end of their good cheer. Corn is so innocent from this calumny of breeding of Mice; that it doth not produce the very Weevils that live in it and consume it: the whole course of whose generation and periodical changes hath been curiously observed and described by the ingenious *Lewenhoeck*. And moreover, that we may deprive the Atheist of all hopes and pretensions of Argument from this baffled opinion of æquivocal Insects, we

Helmont *Imago Fermentat.* &c. p. 92. Edit. 1652.

will acquaint him from the most accurate observations of *Swammerdam*, That even the supposed change of Worms into Flies is no real transmutation; but that most of those Members, which at last become visible to the Eye, are existent at the beginning, artificially complicated together, and cover'd with Membranes and Tunicles, which are afterwards stript off and laid aside: and all the rest of that process is no more surprizing, than the eruption of Horns in some Brutes, or of Teeth and Beard in Men at certain periods of age. And as we have establish'd our assertion of the seminal production of all kinds of Animals; so likewise we affirm, That the meanest Plant cannot be raised without seed by any formative power residing in the Soil. To which assertion we are encourag'd, *First*, from the known Seeds of all Vegetables, one or two only excepted, that are left to future discovery: which Seeds by the help of Microscopes are all found to be real and perfect Plants, with Leaves and Trunk curiously folded up and enclosed in the *Cortex:* nay one single grain of Wheat or Barly or Rye, shall contain four or five distinct Plants under one common Tunicle: a very convincing argument of the Providence and Goodness of God; that those Vegetables that were appointed to be the chief sustenance of Mankind, should have that multiplied fœcundity above any others: and *secondly*, by that famous experiment of

of *Malpighi*, who a long time encloſed a quantity of Earth in a veſſel, ſecured by a fine cloth from the ſmall imperceptible ſeeds of Plants that are blown about with the winds; and had this ſucceſs of his curioſity, to be the firſt happy diſcoverer of this noble and important Truth, That no ſpecies of Plants can be produced out of Earth *de novo*, without a præexiſtent ſeed; and conſequently they were all created and raiſed at the beginning of things by the Almighty Gardener, God bleſſed for ever. And *Laſtly*, as to thoſe various and elegant Shells, that are dug up in Continents and embodied in Stones and Rocks at a vaſt diſtance from any Sea; which this Atheiſt may poſſibly allege for an inſtance of a Plaſtick faculty of Nature: 'tis now generally agreed by the moſt diligent Inquirers about them, That they are no ſportfull productions of the Soil, as was formerly believed, but that all did once belong to real and living Fiſhes; ſeeing that each of them doth exactly reſemble ſome other Shell on the Sea-ſhore, both in its outward lineaments, and inward texture, and ſpecifick gravity, and all other properties: which therefore are ſo far from being ſubſervient to Atheiſts in their audacious attempts againſt God and Religion, that they rather afford an experimental confirmation of the Univerſal Deluge.

And thus we have competently ſhewn, that every Species of Living Creatures, every ſmall Inſect, and

and even the Herbs of the Field give a casting vote against Atheism; and declare the necessity of a supernatural Formation. If the Earth in its first constitution had been left to its self, what horrid deformity and desolation had for ever overspread its face? not one living Inhabitant found on all its spacious surface; not so much as a Worm in the Bowels of it, nor one single Fish in the vast Bosom of the Sea; not a Mantle of Grass or Moss, to cover and conceal the nakedness of Nature. An eternal Sterility must have possessed the World, where all things had been fixed and fasten'd everlastingly with the Adamantin chains of Specifick Gravity; if the Almighty had not spoken and said, *Let the Earth bring forth Grass, the Herb yielding Seed, and the Fruit-tree yielding Fruit after its kind, and it was so.* 'Twas God, that then created the first seminal forms of all Animals and Vegetables, that *commanded the Waters to bring forth abundantly*, and *the Earth to produce Living Creatures after their kind*; that *made Man in his own Image after his own likeness*: that by the efficacy of his first Blessing made *him be fruitfull and multiply and replenish the Earth*; by whose alone power & conservation *we all live and move and have our Being.*

May the same most Glorious God of his infinite mercy grant, that as we *have sought the Lord, and felt after him, and found him* in these works of his Creation: so now that *we have known God, we may glorify him as God* both now, and for evermore. *Amen.*

FINIS.

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A Confutation of Atheism

From the

Structure and Origin of Humane Bodies.

The Third and Last PART.

A SERMON

Preached at

Saint Martin's in the Fields,

SEPTEMBER the 5th. 1692.

Being the *Fifth* of the Lecture Founded by the Honourable *ROBERT BOYLE*, Esquire.

By *RICHARD BENTLEY*, M.A.
Chaplain to the Right Reverend Father in God,
EDWARD, Lord Bishop of *Worcester*.

LONDON,
Printed for *Henry Mortlock*, at the *Phœnix* in St. *Paul*'s Church-yard. 1692.

UMI

Imprimatur.

Geo. Royse, R^mo in Christo Patri ac D^no D^no *Johanni* Archiep. *Cantuar.* à Sacris Domest.

Septemb. 7.
1692.

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ACTS XVII. 27.

That they ſhould ſeek the Lord, if haply they might feel after him, and find him: though he be not far from every one of us; for in him we Live, and Move, and have our Being.

IN my former Diſcourſes, to which I muſt refer you, I have endeavour'd to prove, that Humane Race was neither (1) from Everlaſting without beginning; nor (2) owes its beginning to the Influence of Heavenly Bodies; nor (3) to what they call Nature, or to the neceſſary and mechanical motions of dead ſenſleſs Matter. I proceed now to examin the fourth and laſt Plea of the Enemies to Religion and their own Souls, That Mankind came accidentally into the World, and hath its Life and Motion and Being by mere *Chance* and *Fortune*.

We need not much wonder, that this laſt Opinion ſhould obtain almoſt univerſally among the Atheiſts of theſe times. For whereas the Other do require ſome ſmall ſtock of Philoſophy to underſtand or maintain them: This Account is ſo eaſy and compendious,

that it needs none at all; and conſequently is the more proper and agreeable to the great Induſtry and Capacity of the moſt numerous Party of them. For what more eaſy to ſay, than that all the Bodies of the firſt Animals and Plants were ſhuffled into their ſeveral Forms and Structures *fortuitouſly*, that is, theſe Atheiſts know not how, nor will trouble themſelves to endeavour to know? For that is the meaning of Chance; and yet this is all, that they ſay, or can ſay to the great Matter in queſtion. And indeed this little is enough in all reaſon; and could they impoſe on the reſt of Mankind, as eaſily as delude themſelves with a notion, That *Chance* can effect a thing; it would be the moſt expedite and effectual means to make their Cauſe victorious over Vertue and Religion. For if you once do allow them ſuch an acceptation of Chance, you have precluded your ſelf (they think) from any more reaſoning and objecting againſt them. The Mechanical Atheiſt, though you grant him his Laws of Mechaniſm, is nevertheleſs inextricably puzzled and baffled with the firſt Formation of Animals: for he muſt undertake to determin all the various Motions and Figures and Poſitions and Combinations

tions of his Atoms; and to demonſtrate, that ſuch a quantity of Motion impreſſed upon Particles ſo ſhaped and ſituated, will neceſſarily range and diſpoſe them into the Form and Frame of an Organical Body: an attempt as difficult and unpromiſing of ſucceſs, as if he himſelf ſhould make the Eſſay, to produce ſome new Kinds of Animals out of ſuch ſenſleſs Materials, or to rebuild the moving and living Fabrick out of its duſt in the grave. But the Atheiſt, that we are now to deal with, if you do but concede to him, that Fortune may be an Agent; doth preſume himſelf ſafe and invulnerable, ſecure above the reach of any further diſputes. For if you proceed to ask queſtions, and bid him aſſign the proper Cauſes and determinate Manner of that fortuitous Formation: you thereby deny him what you granted before, and take away the very *Hypotheſis* and the Nature of Chance; which ſuppoſeth that no certain Cauſe or Manner of it can poſſibly be aſſigned. And as the ſtupidity of ſome Libertines, that demand a ſight of a Spirit or Humane Soul to convince them of its Exiſtence, hath been frequently and deſervedly expoſed; becauſe whatſoever may be the object of our Sight, muſt not be

be a Soul or Spirit, but an opake Body: ſo this Atheiſt would tax us of the like Nonſenſe and Contradiction; if after he hath named to us Fortune or Chance, we ſhould expect from him any particular and diſtinct account of the Origin of Mankind. Becauſe it is the very eſſence and notion of his Chance, to be wholly unaccountable: and if an account could be given of it; it would then no longer be Chance, but Mechaniſm, or a neceſſary production of certain Effects from certain Cauſes according to the Univerſal Laws of Motion. Thus we are to know, that if once we admit of Fortune in the Formation of Mankind; there is no further Enquiry to be made, no more Difficulties to be ſolved, and no Account to be demanded. And who then can admire, if the inviting eaſineſs and compendiouſneſs of this Aſſertion ſhould ſo dazle the eyes of our Atheiſt, that he over-looks thoſe groſs Abſurdities, that are ſo conſpicuous in it?

(1) For firſt, if this Atheiſt would have his Chance or Fortune to be a real and ſubſtantial Agent; as the Vulgar ſeem to have commonly apprehended, ſome making it a Divinity, others they do not conceive what: he is doubly more ſtupid and more ſupinely ignorant

norant than thoſe Vulgar; in that he aſſumes ſuch a notion of Fortune, as beſides its being erroneous, is inconſiſtent with his Atheiſm. For ſeeing that according to the Atheiſts, the whole Univerſe is *Corpus & Inane, Body and nothing elſe:* this Chance, if it do really and phyſically effect any thing, muſt it ſelf be Body alſo. And what a numerous train of Abſurdities do attend ſuch an aſſertion? too viſible and obvious to deſerve to be here inſiſted on. For indeed it is no leſs than flat contradiction to it ſelf. For if this Chance be ſuppoſed to be a Body; it muſt then be a part of the common Maſs of Matter: and conſequently be ſubject to the univerſal and neceſſary Laws of Motion: and therefore it cannot be Chance, but true Mechaniſm and Nature.

(2) But ſecondly, if he forbear to call Chance a real Agent, and is content to have it only a Reſult or Event: ſeeing that all Matter or ſome portion of it may be naturally exempt from theſe ſuppoſed Mechanical Laws, and be endowed with a power of ſpontaneous or fortuitous Motion; which power, when it is exerted, muſt produce an Effect properly Caſual, and therefore might conſtitute the firſt Animate Bodies accidentally, a-

gainſt

gainſt the ſuppoſed natural tendency of the Particles of thoſe Bodies: even this ſecond Aſſertion is contrary to common Senſe as well as common Obſervation. For how can he conceive, that any parcel of dead Matter can ſpontaneouſly divert and decline it ſelf from the line of its motion without a new impulſe from external Bodies? If it can intrinſecally ſtir it ſelf, and either commence its motion or alter its courſe; it muſt have a principle of ſelf-activity, which is Life and Senſe. But
Serm. 2. Senſe I have proved formerly to be incompatible with mere Bodies, even thoſe of the moſt compound and elaborate textures; much more with ſingle Atoms or ſolid Particles of Matter, that having no inteſtine motion of Parts are deſtitute of the firſt foundation and capacity of Life. And moreover, though theſe Particles ſhould be ſuppoſed to have this internal principle of Senſe, it would ſtill be repugnant to the notion of Chance: becauſe their Motions would not then be Caſual, but Voluntary; not by Chance, but Choice and Deſign. And *again*, we appeal to Obſervation, whether any Bodies have ſuch a power of Fortuitous Motion: we ſhould ſurely have experiment of it in the Effects

fects of Nature and Art: No Body would retain the ſame conſtant and uniform Weight according to its Bulk and Subſtance; but would vary perpetually, as that ſpontaneous power of Motion ſhould determin its preſent tendency. All the various Machins and Utenſils would now and then play odd Pranks and Capricio's quite contrary to their proper Structures and Deſigns of the Artificers. Whereas on the contrary all Bodies are obſerved to have always a certain and determinate Motion according to the degrees of their External Impulſe, and their inward Principle of Gravitation, and the Reſiſtence of the Bodies they occurr with: which therefore is without Error exactly foreſeen and computed by ſagacious Artiſts. And if ever Dead Matter ſhould deviate from this Motion; it could not proceed from it ſelf, but a Supernatural Agent; and ought not to be called a Chance, but a Miracle.

For Chance is but a mere Name, and really Nothing in it ſelf: a conception of our own Minds, and only a Compendious way of ſpeaking, whereby we would expreſs, That ſuch Effects, as are commonly attributed to Chance, were verily produced by their true

and proper Cauſes, but without their deſigning to produce them. And in any Event called Caſual, if you take away the real and phyſical Cauſes, there remains nothing, but a ſimple Negation of the Agents intending ſuch an Event: which Negation being no real Entity, but a Conception only of Man's Intellect wholly extrinſecal to the Action, can have no title to a ſhare in the production. As in that famous Example (which, *Plutarch* ſays, is the only one, where Fortune is related to have done a thing artificially) of a Painter, that having finiſhed the Picture of a Horſe, excepting the looſe Froth about his Mouth and his Bridle; and after many unſucceſsfull eſſays deſpairing to do that to his ſatisfaction, in a great rage threw his Spunge at it, all beſmear'd, as it was, with the Colours; which fortunately hitting upon the right place, by one bold ſtroke of Chance moſt exactly ſupplied the want of Skill in the Artiſt: even here it is manifeſt, that conſidering the Quantity and Determination of the Motion, that was impreſſed by the Painter's hand upon the Spunge, compounded with the ſpecifick Gravity of the Spunge, and the reſiſtence of the Air; the Spunge did mechanically and unavoidably

Plutarch. περὶ τύχης.

voidably move in that particular line of Motion, and ſo neceſſarily hit upon that part of the Picture; and all the paint, that it left there, was as certainly placed by true natural Cauſes, as any one ſtroke of the Pencil in the whole Piece. So that this ſtrange effect of the Spunge was fortuitous only with reſpect to the Painter, ſeeing he did not deſign nor foreſee ſuch an effect; but in it ſelf and as to its real Cauſes it was neceſſary and natural. In a word, the true notion of *Fortune* (τῆς τύχης) denoteth no more, than the Ignorance of ſuch an event in ſome Knowing Agent concerned about it. So that it owes its very Being to Human Underſtanding, and without relation to that is really Nothing. How abſurd then and ridiculous is the Atheiſt, that would make this Fortune the cauſe of the Formation of Mankind; whereas manifeſtly there could be no ſuch Thing or Notion in the World as Fortune, till Humane Nature was actually formed? It was Man that firſt made Fortune, and not Fortune that produced Man. For ſeeing that Fortune in its proper acceptation ſuppoſeth the Ignorance of ſomething, in a ſubject capable of Knowledge; if you take away Mankind, ſuch a Notion hath no Exiſtence, neither with relation to In-

animate Bodies that can be conſcious of nothing, nor to an Omniſcient God, that can be ignorant of nothing: And ſo likewiſe the adequate Meaning of *Chance* (τῷ Αυτοματῳ) (as it is diſtinguiſhed from Fortune; in that the latter is underſtood to befall only Rational Agents, but Chance to be among Inanimate Bodies) is really a bare Negation, that ſignifies no more than this, That any Effect among ſuch Bodies aſcribed to Chance, is verily produced by Phyſical Agents, according to the eſtabliſhed Laws of Motion, but without their Conſciouſneſs of concurring to the Production, and without their Intention of ſuch an Effect. So that *Chance* in its true ſenſe is all one with *Nature:* and both words are uſed promiſcuouſly by ſome ancient Writers to expreſs the ſame thing. And we muſt be wary, leſt we aſcribe any real Subſiſtence or Perſonality to this Nature or Chance: for it is merely a notional and imaginary thing; an abſtract Univerſal, which is properly Nothing; a Conception of our own making, occaſion'd by our reflecting upon the ſettled Courſe of things; denoting only thus much, That all thoſe Bodies move and act according

Plato X. de Legibus. πῦρ καὶ ὕδωρ καὶ γῆν καὶ ἀέρα, φύσει πάντα εἶναι καὶ τύχῃ φασίν.—ὅτε διὰ πνὸς θεὸν ὅτε διὰ τέχνην, ἀλλὰ ἃ λέγουσιν φύσει καὶ τύχῃ.

according to their eſſential properties and qualities without any conſciouſneſs or intention of ſo doing. So that in this genuine acceptation of Chance, here is nothing ſuppoſed, that can ſuperſede the known Laws of Natural Motion: and thus to attribute the Formation of Mankind to Chance, is all one with the former Atheiſtical Aſſertion, that aſcribes it to Nature or Mechaniſm: and conſequently it hath received a prolix and ſufficient Refutation in my preceding Diſcourſe.

(3) But thirdly, 'tis likely that our Atheiſt may willingly renounce the Doctrine of Chance as a thing differing from Nature, and may allow it to be the ſame thing, and that too no real and ſubſtantial Agent, but only an abſtract intellectual Notion: but ſtill he hath another Expedient in reſerve, which is a middle and ſafe way between the former rigourous Mechaniſm and the extravagancies of Fortuitous Motion: *viz.* That at the Beginning all things ('tis true) proceeded neceſſarily and fatally according to the Mechanical powers and affections of Matter: but nevertheleſs the ſeveral Kinds of Animals were not formed at the firſt trial and effort without one error or miſcarriage; (as ſtrict Mechaniſm would ſuppoſe;)

poſe;) but there was an immenſe Variety of Ferments and Tumors and Excreſcences of the Soil, pregnant and big with *Fœtus*'s of all imaginable ſhapes and ſtructures of Body: Millions of which were utterly uncapable of Life and Motion, being the *Molæ*, as it were, and the Abortions of Mother Earth: and many of thoſe that had Life and Powers to preſerve their own Individuals, yet wanted the due means of Propagation, and therefore could not tranſmit their Species to the following Ages: and that thoſe few only, that we now find in Being, did happen (for he cannot expreſs it but by the Characters of a Chance) to have all the parts neceſſary not only for their own Lives, but for the Continuation of their Kinds. This is the favourite Opinion, among the Atheiſts, and the moſt plauſible of all; by which they think they may elude that moſt formidable Argument for the Being of God, from the admirable contrivance of Organical Bodies and the exquiſite fitneſs of their ſeveral Parts for thoſe Ends and Uſes they are put to, and ſeem to have been deſigned for. For, ſay they, ſeeing that thoſe innumerable Inſtances of Blunder and Deformity were quickly removed out of Knowledge

Βυχνῆ ἀνδεόπρωες Emped.

ledge and Being; it is plain that no Animals ought now to be found, but ſuch as have due Organs neceſſary for their own nouriſhment and increaſe of their Kinds: ſo that this boaſted Uſefulneſs of Parts, which makes Men attribute their Origination to an intelligent and wiſe Agent, is really no argument at all: becauſe it follows alſo from the Atheiſts Aſſertion. For ſeeing that ſome Animals are actually preſerved in Being till now, they muſt needs all of them have thoſe parts that are of Uſe and Neceſſity: but That at firſt was only a Lucky Hit without Skill or Deſign, and ever ſince is a neceſſary condition of their Continuation. And ſo for inſtance, when they are urged with the admirable Frame and Structure of the Eye; which conſiſts of ſo great a Variety of Parts, all excellently adapted to the Uſes of Viſion; that (to omit Mathematical Conſiderations more proper for Opticks) hath its many Coats and Humors tranſparent and colourleſs, leſt it ſhould tinge and ſophiſticate the Light that it lets in, by a natural Jaundice; that hath its Pupil ſo conſtituted, as to admit of Contraction and Dilatation according to the differing degrees of Light, and the Exigencies of ſeeing; that hath

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Eye-lids ſo commodiouſly placed, to cleanſe the Ball from Duſt, to ſhed neceſſary moiſture upon it through numerous Glandules, and to be drawn over it like a Curtain for the convenience of ſleep; that hath a thouſand more Beauties in its figure and texture never ſtudied nor admired enough: they will briskly reply, that they willingly concede all that can be ſaid in the commendation of ſo noble a member; yet notwithſtanding they cannot admit for good reaſoning, *He that formed the Eye, ſhall not he ſee?* for it was blind Nature alone or Matter mechanically moved without conſciouſneſs or direction, that made this curious Organ of Viſion. For the ſhort of the matter is this: This elegant ſtructure of the Eye is no more than is neceſſary to Seeing; and this noble faculty of Seeing is no more than is neceſſary to Life; and conſequently is included in the very ſuppoſition of any Animals living and continuing till now; though thoſe be but the very few that at the beginning had the good fortune to have Eyes, among many millions of Monſters that were deſtitute of them, *ſine vultu cæca reperta*, and therefore did fatally periſh ſoon after their Birth. And thus when we inſiſt on o-

Pſal. 94. 9.

Lucret. lib. 5.

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ther like arguments of Divine Wisdom in the frame of Animate Bodies; as the artificial Position of many Myriads of Valves, all so situate as to give a free passage to the Blood and other Humors in their due Chanels and Courses, but not permit them to regurgitate and disturb the great Circulation and Oeconomy of Life; as the Spiral, and not Annulary, Fibres of the Intestines for the better Exercise of their Functions; as the provident furnishing of Temporary parts for the *Fœtus* during the time of gestation, which are afterwards laid aside; as the strange sagacity of little Insects in chooſing of fit Places for the Exclusion of their Eggs, and for the provision of proper food, when the young ones are hatcht and need it; as the ardent στοργὴ or natural Affection in those Animals, whose off-spring cannot at first procure their own sustenance, but must infallibly perish, if not fed by the Parents; as the untaught Instincts and Impresses upon every species, directing them without imitation or deliberation to the ready knowledge of proper food, to one and the best way of their preservation and defence, and to the never-failing propagation of their own kind: what-ever Considerations of this nature you

propoſe to this Atheiſt, as indeed ſuch Inſtances are innumerable, all evidently ſetting forth the Almighty's Wiſdom and Goodneſs to ſuch as are able to judge and will judge indifferently and impartially; he hath this one ſubterfuge from them all, That theſe things are miſtaken for tokens of Skill and Contrivance, though they be but neceſſary Conſequences of the preſent Exiſtence of thoſe creatures. For he that ſuppoſeth any Animals to ſubſiſt, doth by that very ſuppoſition allow them every Member and Faculty that are neceſſary to ſubſiſtence; ſuch as are thoſe we have juſt now enumerated. And therefore, unleſs we can prove *à priori* and independent of this Uſefulneſs, now that Things are once ſuppoſed to have exiſted and propagated; That among almoſt infinite Trials and Eſſays at the beginning of things, among millions of monſtrous Shapes and imperfect Formations, a few ſuch Animals, as now exiſt, *could not poſſibly* be produced; theſe After-Conſiderations are of very little moment: becauſe if ſuch Animals could in that way *poſſibly* be formed, as might live and move and propagate their Beings; all this admired and applauded Uſefulneſs of their ſeveral Fabricks is but a neceſ-

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ſary condition and conſequence of their Exiſtence and Propagation.

This is the laſt pretence and ſophiſtry of the Atheiſts againſt the Propoſition in my Text, That we received our Life and Being from a Divine Wiſdom and Power. And as they cannot juſtly accuſe me of any ways concealing or balking their grand Objection: ſo I believe theſe following Conſiderations will give them no reaſon to boaſt, That it cannot receive a juſt and ſatisfactory Anſwer.

(1) Firſt therefore, we affirm that we can prove and have done it already by arguments *à priori* (which is the challenge of the Atheiſts) that theſe Animals, that now exiſt, could not *poſſibly* have been formed at firſt by millions of trials. For ſeeing that they allow by their very *Hypotheſis* (and without ſtanding to that Courteſie we have proved it before) that there can be no Caſual or ſpontaneous Motion of the Particles of Matter: it will follow that every ſingle Monſter among ſo many ſuppoſed Myriads muſt have been mechanically and neceſſarily formed according to the known Laws of Motion, and the temperament and quality of the Matter that it was made of. Which is ſufficient to evince, that

Multaq; tum tellus etiam Portenta creare, &c. Lucret. 5.

no ſuch Monſters were or could have been formed. For to denominate them even Monſters; they muſt have had ſome rude kind of Organical Bodies; ſome *Stamina* of Life, though never ſo clumſy; ſome Syſtem of Parts compounded of Solids and Liquids, that executed (though but bunglingly) their peculiar Motions and Functions. But we have lately ſhewn it impoſſible for Nature unaſſiſted to conſtitute ſuch Bodies, whoſe ſtructure is againſt the Law of Specifick Gravity. So that ſhe could not make the leaſt endeavour towards the producing of a Monſter; or of any thing that hath more Vital and Organical Parts, than we find in a Rock of Marble or a Fountain of Water. And *again*, though we ſhould not contend with them about their Monſters and Abortions; yet ſeeing that they ſuppoſe even the perfect Animals, that are ſtill in being, to have been formed mechanically among the reſt; and only add ſome millions of Monſters to the reckoning; they are liable to all the Difficulties in the former Explication, and are expreſly refuted through the whole preceding Sermon: where it is abundantly ſhown, that a Spontaneous Production is againſt the Catholick Laws of Motion, and

againſt

againſt Matter of Fact; a thing without Example, not only in Man and the nobler Animals, but in the Smalleſt of Inſects and the Vileſt of Weeds: though the Fertility of the Earth cannot be ſaid to have been impaired ſince the beginning of the World.

(2) Secondly, we may obſerve that this Evaſion of the Atheiſt is fitted only to elude ſuch Arguments of Divine Wiſdom, as are taken from things Neceſſary to the conſervation of the Animal, as the Faculties of Sight and Motion and Nutrition, and the like; becauſe ſuch Uſefulneſs is indeed included in a general Suppoſition of the Exiſtence of that Animal: but it miſerably fails him againſt other Reaſons from ſuch Members and Powers of the Body, as are not neceſſary abſolutely to Living and Propagating, but only much conduce to our better Subſiſtence and happier Condition So that the moſt obvious Contemplation of the frame of our Bodies; as that we all have double Senſories, two Eyes, two Ears, two Noſtrils, is an effectual Confutation of this Atheiſtical Sophiſm. For a double Organ of theſe Senſes is not at all comprehended in the Notion of bare Exiſtence: one of them being ſufficient

to

to have preſerved Life, and kept up the Species; as common Experience is a witneſs. Nay even the very Nails of our Fingers are an infallible Token of Deſign and Contrivance: for they are uſefull and convenient to give ſtrength and firmneſs to thoſe Parts in the various Functions they are put to; and to defend the numerous Nerves and Tendons that are under them, which have a moſt exquiſite ſenſe of Pain, and without that native Armour would continually be expoſed to it: and yet who will ſay, that Nails are abſolutely neceſſary to Humane Life, and are concluded in the Suppoſition of Simple Exiſtence? It is manifeſt therefore, that there was a Contrivance and Foreſight of the Uſefulneſs of Nails antecedent to their Formation. For the old ſtale pretence of the Atheiſts, That things were firſt made fortuitouſly, and afterwards their Uſefulneſs was obſerved or diſcover'd, can have no place here; unleſs Nails were either abſolutely requiſite to the Exiſtence of Mankind, or were found only in ſome Individuals or ſome Nations of men; and ſo might be aſcribed to Neceſſity upon one account, or to Fortune upon the other. But from the Atheiſt's ſuppoſition, That among the infinite Di-

Lucret. lib. 4. Nil ideo quoniam natum eſt in corpore, ut uti Poſſemus: ſed quod natum eſt, id procreat uſum.

verſity

verſity of the firſt terreſtrial Productions, there were Animals of all imaginable ſhapes and ſtructures of Body, all of which ſurvived and multiplied, that by reaſon of their Make and Fabrick could poſſibly do ſo; it neceſſarily follows, that we ſhould now have ſome Nations without Nails upon their Fingers; others with one Eye only, as the Poets deſcribe the *Cyclopes* in *Sicily*, and the *Arimaſpi* in *Scythia*; others with one Ear, or one Noſtril, or indeed without any Organ of Smelling, becauſe that Senſe is not neceſſary to Man's ſubſiſtence; others deſtitute of the uſe of Language, ſeeing that Mutes alſo may live: one People would have the Feet of Goats, as the feigned *Satyrs* and *Paniſci*, another would reſemble the Head of *Jupiter Ammon*, or the horned Statues of *Bacchus*: the *Sciapodes*, and *Enotocitæ* and other monſtrous Nations would be no longer Fables, but real inſtances in Nature: and, in a word, all the ridiculous and extravagant ſhapes that can be imagin'd, all the fancies and whimſies of Poets and Painters and *Ægyptian* Idolaters, if ſo be they are conſiſtent with Life and Propagation, would be now actually in Being, if our Atheiſt's Notion were true: which therefore may deſervedly paſs

Plinius & Strabo.

paſs for a mere Dream and an Error: till they pleaſe to make new Diſcoveries in *Terra Incognita*, and bring along with them ſome Savages of all theſe fabulous and monſtrous Configurations.

(3) But thirdly, that we may proceed yet further with the Atheiſt, and convince him, that not only his Principle is abſurd, but his Conſequences alſo as abſurdly deduced from it: we will allow him an uncertain extravagant Chance againſt the natural Laws of Motion: though not forgetting that that notion hath been refuted before, and therefore this Conceſſion is wholly *ex abundanti*. I ſay then, that though there were really ſuch a thing as this Chance or Fortune; yet notwithſtanding it is down-right madneſs to aſcribe the Formation of Human Bodies to a Caſt of this Chance. For let us conſider the very Bodies themſelves. Here are confeſſedly all the marks and characters of Deſign in their ſtructure, that can be required, though one ſuppoſe a Divine Author had made them: here is nothing in the Work it ſelf, unworthy of ſo great a Maſter: here are no intrinſecal arguments from the Subject againſt the truth of that Suppoſition. Have we then any capacity

city to judge and distinguish, what is by Chance, and what by Art and Wisdom? Can we be sure, when a Medal is dug out of the ground, with some *Roman* Emperor's Image upon it, and an Inscription that agrees to his Titles and History, and an Impresse upon the Reverse relating to some memorable occurrence in his life; can we be sure, that this Medal was really coined by an Artificer, or is but a Product of the Soil from whence it was taken, that might casually or naturally receive that texture and figure: as many kinds of Fossils are very odly and elegantly shaped according to the modification of their constituent Salts, or the cavities they were formed in? Is it a matter of doubt and controversie, whether the Pillar of *Trajan* or *Antoninus*, the Ruins of *Persepolis*, or the late Temple of *Minerva* were the Designs and Works of Architecture; or perhaps might originally exist so, or be raised up in an Earthquake by subterraneous Vapour? Do not we all think our selves infallibly certain, that this or that very commodious House must needs have been built by Humane Art; though perhaps a natural Cave in a Rock may have something not much unlike to Parlors or Chambers? And yet he must be a mere Idiot, that cannot discern more Strokes

and Characters of Workmanſhip in the Structure of an Animal (in an Humane Body eſpecially) than in the moſt elegant Medal or Ædifice in the World. They will believe the firſt Parents of Mankind to have been fortuitouſly formed without Wiſdom or Art: and that for this ſolid reaſon, Becauſe it is not ſimply *impoſſible*, but that they may have been formed ſo. And who can demonſtrate (if Chance be once admitted of) but that *poſſibly* all the Inſcriptions and other remains of Antiquity may be mere *Luſus Naturæ*, and not Works of Humane Artifice. If this be good reaſoning, let us no longer make any pretences to Judgment or a faculty of diſcerning between things Probable and Improbable: for, except flat contradictions, we may upon equal reaſons believe all things, or nothing at all. And do the Atheiſts thus argue in common matters of Life? Would they have Mankind lye idle, and lay aſide all care of Proviſions by Agriculture or Commerce; becauſe poſſibly the Diſſolution of the World may happen the next moment? Had *Dinocrates* really carved Mount *Athos* into a Statue of *Alexander* the Great, and had the memory of the fact been obliterated by ſome accident; who could after-

Lucret. 5. *Dictis dabit ipſa fidem res Forſitan, & graviter terrarum motibus orbis Omnia conquaſſari in parvo tempore cernes.*

afterwards have proved it impoſſible, but that it might caſually have been formed ſo? for every Mountain muſt have ſome determinate figure, and why then not a Humane one, as poſſibly as another? And yet I ſuppoſe none could have ſeriouſly believed ſo, upon this bare account of Poſſibility. 'Tis an opinion, that generally obteins among Philoſophers, That there is but one Common Matter, which is diverſified by Accidents, and the ſame numerical quantity of it by variations of Texture may conſtitute ſucceſſively all kinds of Bodies in the World. So that 'tis not abſolutely impoſſible; but that, if you take any other Matter of equal weight and ſubſtance with the Body of a Man, you may blend it ſo long, till it be ſhuffled into Humane ſhape and an Organical ſtructure. But who is he ſo abandon'd to ſottiſh credulity, as to think, upon that Principle, That a clod of Earth in a Sack may ever by eternal ſhaking receive the Fabrick of Man's Body? And yet this is very near a-kin, nay it is exactly parallel to the reaſoning of Atheiſts about fortuitous Production. If mere Poſſibility be a good foundation for Belief; even *Lucian*'s True Hiſtory may be *true* upon that account, and *Palæphatus*'s Tales may be *credible* in ſpite of the Title.

Palæph. Περὶ Ἀπίστων *De Incredibilibus.*

It hath been excellently well urged in this caſe both by Ancients and Moderns, that to attribute ſuch admirable Structures to blind Fortune or Chance, is no leſs abſurd than to ſuppoſe, That if innumerable figures of the XXIIII Letters be caſt abroad at random, they might conſtitute in due order the whole *Æneis* of *Virgil* or the *Annales* of *Ennius*. Now the Atheiſts may pretend to elude this Compariſon; as if the Caſe was not fairly ſtated. For herein we firſt make an Idea of a particular Poem; and then demand, if Chance can poſſibly deſcribe That: and ſo we conceive Man's Body thus actually formed, and then affirm that it exceeds the power of Chance to conſtitute a Being like That: which, they may ſay, is to expect Imitation from Chance, and not ſimple Production. But at the firſt Beginning of things there was no Copy to be followed, nor any præ-exiſtent Form of Humane Bodies to be imitated. So that to put the caſe fairly, we ſhould ſtrip our minds and fancies from any particular Notion and Idea of a Living Body or a Poem: and then we ſhall underſtand, that what Shape and Structure ſoever ſhould be at firſt caſually formed, ſo that it could live and propagate, might be Man: and whatſoever ſhould reſult from the ſtrowing of

Cicero *de Natura Deorum*, 2. 37.

thoſe

thoſe looſe Letters, that made any Senſe and Meaſures, might be the Poem we ſeek for.

To which we reply, That if we ſhould allow them, that there was no præ-exiſtent Idea of Humane Nature, till it was actually formed, (for the Idea of Man in the Divine Intellect muſt not now be conſider'd) yet becauſe they declare, that great Multitudes of each Species of Animals did fortuitouſly emerge out of the Soil in diſtant Countries and Climates; what could that be leſs than Imitation in blind Chance, to make many Individuals of one Species ſo exactly alike? Nay though they ſhould now, to croſs us and evade the force of the Argument, deſert their ancient Doctrine, and derive all ſorts of Animals from ſingle Originals of each kind, which ſhould be the common Parents of all the Race: yet ſurely even in this account they muſt neceſſarily conſtitute Two at leaſt, Male and Female, in every Species; which Chance could neither make ſo very nearly alike, without Copying and Imitation; nor ſo uſefully differing, without Contrivance and Wiſdom. So that let them take whether they will: If they deduce all Animals from ſingle pairs of a ſort; even to make the

Lucret. 5. *Hinc ubi quæque loci regio opportuna dabatur, Creſcebant uteri, &c:* & ibid. *Inde loci mortalia ſæcla creavit, Multa modis multis varia ratione coorta.*

Second

Second of a Pair, is to write after a Copy; it is, in the former compariſon, by the caſting of looſe Letters to compoſe the præ-exiſtent particular Poem of *Ennius*: But if they make numerous Sons and Daughters of Earth among every Species of Creatures, as all their Authors have ſuppoſed; this is not only, as was ſaid before, to believe a Monky may once ſcribble the *Leviathan* of *Hobbes*, but may do the ſame frequently by an Habitual kind of Chance, even above the number of all the Impreſſion.

Let us conſider, how next to Impoſſible it is, that Chance (if there were ſuch a thing) ſhould in ſuch an immenſe Variety of Parts in an Animal twice hit upon the ſame Structure, ſo as to make a Male and a Female. Let us reſume the former inſtance of the XXIIII Letters thrown at random upon the ground. 'Tis a Mathematical Demonſtration, That theſe XXIIII do admit of ſo many Changes in their order, may make ſuch a long roll of differently ranged Alphabets, not two of which are alike; that they could not all be exhauſted, though a Million millions of Writers ſhould each write above a thouſand Alphabets a-day for the ſpace of a Million millions of years. What ſtrength of Imagination can extend it ſelf to embrace and comprehend ſuch a prodigious

Tacqueti Arithmet. cap. de Progreſſione.

digious Diverſity? And it is as infallibly certain, that ſuppoſe any particular order of the Alphabet to be aſſigned, and the XXIIII Letters to be caſt at a venture, ſo as to fall in a Line; it is ſo many Million of millions odds to one againſt any ſingle throw, that the aſſigned Order will not be caſt. Let us now ſuppoſe, there be only a thouſand conſtituent Members in the Body of a Man, (that we may take few enough) it is plain that the different Poſition and Situation of theſe thouſand Parts, would make ſo many differing Compounds and diſtinct Species of Animals. And if only XXIIII Parts, as before, may be ſo multifariouſly placed and order'd, as to make many Millions of Millions of differing Rows: in the ſuppoſition of a thouſand parts, how immenſe muſt that capacity of Variation be? even beyond all thought and denomintion, to be expreſſed only in mute Figures, whoſe multiplied Powers are beyond the narrowneſs of Language, and drown the Imagination in aſtoniſhment and confuſion. Eſpecially if we obſerve, that the Variety of the Alphabet conſider'd above, was in mere Longitude only: but the Thouſand parts of our Bodies may be Diverſified by Situation in all the Dimenſions of Solid Bodies: which multiplies all over and

over

over again, and overwhelms the fancy in a new Abyſs of unfathomable Number. Now it is demonſtratively certain, that it is all this odds to one, againſt any particular trial, That no one man could by caſual production be framed like another; (as the Atheiſts ſuppoſe thouſands to be in ſeveral regions of the Earth;) and I think 'tis rather more odds than leſs, that no one Female could be added to a Male; in as much as that moſt neceſſary Difference of Sex is a higher token of Divine Wiſdom and Skill, above all the power of Fortuitous Hits, than the very Similitude of both Sexes in the other parts of the Body. And *again* we muſt conſider, that the vaſt imparity of this Odds againſt the accidental likeneſs of two Caſual Formations is never leſſen'd and diminiſh'd by Trying and Caſting. 'Tis above a Hundred to one againſt any particular throw, That you do not caſt any given Sett of Faces with four Cubical Dice: becauſe there are ſo many ſeveral Combinations of the ſix Faces of four Dice. Now after you have caſt all the trials but one: 'tis ſtill as much odds at the laſt remaining time, as it was at the firſt. For blind inſenſible Chance cannot grow cunning by many experiments; neither have the preceding Caſts any influence upon thoſe that come after.

So

ſo that if this Chance of the Atheiſts ſhould have eſſayed in vain to make a Species for a Million millions of Ages, 'tis ſtill as many Millions odds againſt that Formation, as it was at the firſt moment in the beginning of Things. How incredible is it therefore; that it ſhould hit upon two Productions alike, within ſo ſhort duration of the world, according to the Doctrine of our Atheiſts? how much more, that it ſhould do ſo within the compaſs of a hundred years, and of a ſmall tract of Ground; ſo that this Male and Female might come together? If any Atheiſt can be induced to ſtake his Soul for a wager, againſt ſuch an inexhauſtible diſproportion; let him never hereafter accuſe others of Eaſineſs and Credulity.

Luc. 5. *Verum, ut opinor, habet novitatem Summa, recenſq; Natura eſt mundi, neque pridem exordia cepit.*

(4) But fourthly, we will ſtill make more ample Conceſſions, and ſuppoſe with the Atheiſt, that his Chance has actually formed all Animals in their terreſtrial Wombs. Let us ſee now, how he will preſerve them to Maturity of Birth. What Climate will he cheriſh them in, that they be not inevitably deſtroyed by Moiſture or Cold? Where is that æquability of Nine Months warmth to be found? that uniform warmth, which is ſo neceſſary even in the incubation of Birds, much more in the time of geſtation of Viviparous A-

nimals. I know, his Party have placed this great Scene in *Ægypt*, or ſomewhere between the two *Tropicks*. Now not to mention the Cool of the Nights, which alone would deſtroy the Conceptions; 'tis known that all thoſe Countries have either inceſſant Rains every year for whole months together, or are quite laid under water by Flouds from the higher Grounds; which would certainly corrupt and putrefy all the teeming Wombs of the Earth, and extinguiſh the whole brood of *Embryons* by untimely Abortions.

Ceſalpin. Berigard.

(5) But fifthly, we will ſtill be more obliging to this Atheiſt, and grant him his petition, That Nature may bring forth the young Infants vitally into the World. Let us ſee now what Suſtenance, what Nurſes he hath provided for them. If we conſider the preſent Conſtitution of Nature; we muſt affirm, that moſt Species muſt have been loſt for want of foſtering and feeding. 'Tis a great miſtake that, that Man only comes weak and helpleſs into the world: whereas 'tis apparent, that excepting Fiſh and Inſects (and not all of them neither) there are very few or no Creatures, that can provide for themſelves at firſt without the aſſiſtance of Parents. So that unleſs they ſuppoſe Mother Earth to be a great Animal,

Animal, and to have nurtured up her young Offspring with a conscious Tenderness and providential Care; there is no possible help for it, but they must have been doubly starved both with hunger and cold.

(6) But sixthly, we will be yet more civil to this Atheist, and forgive him this Difficulty also. Let us suppose the first Animals maintain'd themselves with food, though we cannot tell how. But then what security hath he made for the Preservation of Humane Race from the Jaws of ravenous Beasts? The Divine Writings have acquainted us, that God at the beginning gave Mankind *Dominion*, (an impressed awe and authority) *over every living thing that moveth upon the Earth.* But in the Atheists *Hypothesis* there are no imaginable means of Defence. For 'tis manifest, that so many Beasts of Prey, Lions, Tigres, Wolves and the like, being of the same age with Man, and arriving at the top of their Strength in one year or two, must needs have worried and devoured those forlorn Brats of our Atheists, even before they were wean'd from the *Foramina Terræ*: or at least in a short time after, seeing that all the Carnivorous Animals would have multiplied exceedingly by several Generations; before those Children that escaped at first, could come to the Age of Puberty. So that Men would always lessen, and their Enemies always encrease. Gen. 1.28. *Lucret.* 5.

But some of them will here pretend, that *Epicurus* was out in this matter; and that they were not born mere Infants out of those Wombs of the Earth; but Men at their full growth, and in the prime of their strength. But I pray what should hinder those grown lusty Infants, from breaking sooner those Membranes that involved them; as the Shell of the Egg is broken by the Bird, and the *Amnios* by the *Fœtus*? Were the Membranes so thick and tough, that the *Fœtus* must stay there, till he had teeth to eat through them, as young Maggots do through a Gall? *But let us answer these Fools according to their*

their Folly. Let us grant, that they were born with Beards, and in the full time of Manhood. They are not yet in any better condition: here are ſtill many Enemies againſt few, many *Species* againſt One; and thoſe Enemies ſpeedily multiplying in the ſecond and third and much lower generations; whereas the Sons of the Firſt Men muſt have a tedious time of Childhood and Adoleſcence, before they can either themſelves aſſiſt their Parents, or encourage them with new hopes of Poſterity. And we muſt conſider withall, that (in the notion of Atheiſm) thoſe Savages were not then, what civilized Mankind is now; but *Mutum & turpe pecus*, without Language, without mutual Society, without Arms of Offence, without Houſes or Fortifications; an obvious and expoſed Prey to the ravage of devouring Beaſts; a moſt ſorry and miſerable Plantation towards the Peopling of a World.

And now that I have followed the Atheiſts through ſo many dark mazes of Error and Extravagance: having to my knowledge omitted nothing on their ſide, that looks like a Difficulty; nor propoſed any thing in Reply, but what I my ſelf really believe to be a juſt and ſolid Anſwer: I ſhall here cloſe up the Apoſtle's Argument of the Exiſtence of God from the conſideration of Humane Nature. And I appeal to all ſober and impartial Judges of what hath been deliver'd; Whether thoſe Noble Faculties of our Souls may be only a mere Sound and Echo from the claſhing of ſenſleſs Atoms, or rather indubitably muſt proceed from a Spiritual Subſtance of a Heavenly and Divine Extraction: whether theſe admirable Fabricks of our Bodies ſhall be aſcribed to the fatal Motions or fortuitous Shufflings of blind Matter, or rather beyond controverſy to the Wiſdom and Contrivance of the Almighty Author of all things, *Who is Wonderfull in Counſel, and Excellent in Working.* To whom, *&c.*

Iai. 28. 29.

F I N I S.